

REVISION OF AUSTRALIAN LEPIDOPTERA: DREPANIDAE,
LIMACODIDAE, ZYGAENIDAE.

By A. JEFFERIS TURNER, M.D., F.E.S.

[Read 29th September, 1926.]

The present instalment, after a few supplementary notes on families previously dealt with, contains a revision of three unrelated families, one of which is moderately represented in our fauna, and the other two only to a small extent.

Fam. *Lymantriadae*.
Unrecognized species.

Orgyia aneliopa Low., Proc. Linn. Soc. N.S.W., 1915, p. 478.

Fam. *Anthelidae*.
ANTHELA PYRRHOBAPHES.

Turn., *Pap. Proc. Roy. Soc. Tas.*, 1925, p. 114. Tasmania: Zeehan.

ANTHELA PHAEOZONA.

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ANTHELA EXCELLENS Wik.

I have lately seen three ♂ examples. This species may be recognized by its brilliant orange-red wings, thorax, and abdomen, contrasting sharply with the grey-whitish head. The ♂ expands to 70 and 80 mm. The antemedian and sub-terminal lines and fuscous suffusion of forewing are variable; the antemedian line may be absent, or there may be two. The discal dots are absent on the upper surface, except the posterior dot on forewing, which is slightly indicated; beneath they are well developed and white-centred.

Queensland: Montville (1,500 ft.), near Nambour, Brisbane, Bunya Mts. (3,000 ft.).

ANTHELA ASTATA, n. sp.

αστατος, unstable, variable.

♂. 50-80 mm. ♀. 84-110 mm. Head, thorax, and abdomen brown, grey-brown, ochreous-brown, or greenish-ochreous. Palpi fuscous. Antennae whitish or yellow; pectinations in ♂ 6 to 8, in ♀ 1½ to 2, brownish. Legs fuscous finely irrorated with whitish; coxae and anterior femora reddish-brown, ochreous-grey, or greenish; femora with a white apical spot. Forewings triangular, costa straight to middle, thence strongly arched in ♂, in ♀ gently and uniformly arched, apex pointed, slightly produced, often in ♀ strongly produced, termen slightly bowed, scarcely oblique; brown, grey-brown, ochreous-brown, or greenish-ochreous; often with darker suffusion or with irregular fuscous blotches; two whitish discal dots usually outlined with fuscous beneath one-third and one-half costa; usually an

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irregularly dentate, outwardly curved, fuscous, transverse line from one-sixth costa to one-third dorsum, and a second from one-third costa between discal dots to mid-dorsum; a dark oblique line from two-thirds costa, usually sharply bent inwards beneath costa, to two-thirds dorsum, closely followed by a pale line; two or three strongly crenated fuscous lines beyond this, sometimes reduced to a single row of dots; cilia concolorous. Hindwings with termen rounded, tornus slightly produced; as forewings but without discal dots. Underside reddish-brown, grey-brown, or ochreous-brown with two discal dots in each wing, those in forewing always, in hindwings sometimes, whitish in centre.

Very variable. In one ♂ the forewings are pale ochreous-green, the hindwings yellow. Allied to *A. varia* but readily distinguished by the white discal dots. Occurs in tropical rain-forest or jungle.

North Queensland: Kuranda, near Cairns. Queensland: Montville (1,500 ft.), near Nambour, in February; Brisbane in December and January; Toowoomba in February and March; Bunya Mts. (3,000 ft.) in January. Twelve specimens.

Fam. Notodontidae.

PHERASPIS HARMONICA, n. sp.

ἄρμονικος, well-blended.

♀. 55 mm. Head brownish. Palpi ochreous-whitish; posterior surface fuscous. Antennae grey; in ♀ shortly ciliated. Thorax and abdomen very pale ochreous-brown, almost whitish. Legs pale ochreous-grey. Forewings oval-triangular, costa gently arched, more so towards apex, apex rounded, termen obliquely rounded; basal area whitish-brown, limited by a dark-brown line from midcosta, at first transverse, bent inwards in disc almost to a right angle, and again bent to dorsum at one-quarter; remainder of disc ochreous-grey-whitish; a short, median, transverse, discal mark touching basal area, fuscous edged posteriorly with white; a very indistinct, double, dentate, postmedian line, grey becoming brown on dorsum; an elongate brown mark on costa before apex, containing two dark-brown longitudinal streaks; a series of blackish subterminal dots preceded by an indistinct wavy white line; cilia dark-brown mixed with whitish. Hindwings with termen rounded; ochreous-grey-whitish; a dark-fuscous tornal spot traversed by a white line; cilia concolorous.

Type in Coll. Goldfinch.

Queensland: Yeppoon in November; one specimen.

Gen. *CASCERA* Wlk.

The generic definition should be amended as follows: Eyes with long cilia, sometimes incurved. The cilia are movable, and the presence or absence of incurving in the specimen examined therefore accidental.

CASCERA AMYDRA.

♂. Turn., Proc. Linn. Soc. N.S.W., 1903, p. 74. ♀. *Themerastis amalopa* Turn., Proc. Linn. Soc. N.S.W., 1904, p. 833.

The receipt of two ♂ and two ♀ examples taken at Cairns by Mr. F. H. Taylor enables me to make this correction. The sexes differ in the much greater distinctness of the markings in the ♀, in which the basal and median areas are sharply divided. Both sexes are variable. The anastomosis of 12 with the cell in the hindwings is not constant, but present in 6 out of my 7 examples. Though I have not

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re-examined the types of *celaena* and *acrobela* there can be little doubt that they should also be referred to *Cascera*, and that my genus *Themerastis* should be dropped.

Gen. SCYTHROPHANES, nov.

σκυθροφανης, gloomy-looking.

Face hairy. Tongue strong. Palpi long, ascending; basal joint hairy; second joint moderately thickened with rough scales, appressed to face; terminal joint moderately long, porrect. Thorax not crested; shoulder-flaps triangularly elongate, projecting beyond its posterior edge. Forewings narrow, narrower posteriorly; areole well developed, 2 from two-thirds, 3 from angle, 5 from above middle of cell, 6 from base of areole, 7 separately from apex of areole, 8 and 9 stalked from areole, 10 separate, 11 free. Hindwings twice as broad as forewings, 5 from above middle of cell, 6 absent (coincident with 7), 12 closely approximated to cell to near its end.

Probably allied to *Gallaba* Wlk., with which it agrees in the structure of thorax, but very distinct. I do not know any other genus of the family in which 6 and 7 of hindwings are coincident.

SCYTHROPHANES STENOPTERA, n. sp.

στενοπτερός, narrow-winged.

♂. 44 mm. Head and thorax grey. Palpi 2; whitish, outer surface partly fuscous. Antennae grey; in ♂ bipectinate towards base, pectinations 4, apical half simple. Abdomen pale-grey. Legs whitish; anterior pair partly fuscous. Forewings narrow-oblong, beyond middle more constricted, costa sinuate, apex rounded-rectangular, termen short, obliquely rounded, dorsum sinuate; grey; some fine fuscous lines; a curved line from base to costa at one-sixth; an inwardly-oblique line from one-third costa crossing fold; a very fine crenulate line from two-thirds costa to dorsum beyond middle; indications of a dentate subterminal line; a more distinct submarginal line interrupted by veins; cilia grey. Hindwings with termen rounded; fuscous-grey becoming whitish towards base; cilia white.

Type in National Museum, Melbourne.

Victoria: Inverloch; one specimen.

Fam. Lasiocampidae.

PORELA SUBFASCIATA Wlk.

This species is known only from Tasmania. A mistake has been made by attributing specimens to Kelso, near Bathurst, New South Wales, which came from Kelso, near Launceston, Tasmania (A. Simson).

OPSIRHINA HILAROPA.

Odonestis hilaropa Low., Proc. Linn. Soc. N.S.W., 1900, p. 403.—*Clathe pyrsocoma* Turn., Trans. Roy. Soc. S. Aust., 1902, p. 185.

I unfortunately overlooked Lower's name. Though his description lacks the structural details, which are required for certainty, it agrees fairly well with my species, and I know of no other to which it will apply. His locality, Cape York, North Queensland, also agrees with this identification.

Fam. Drepanidae.

Tongue usually present. Palpi usually short or minute. Forewings with 1 absent, 5 from near lower angle of cell, areole present or absent, 11 from near end

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of cell, or from areole, or stalked with 10. Hindwings with second anal short, running to dorsum, or absent, 1 absent, 5 from near lower angle of cell, 6 and 7 remote at origin, 7 from costal margin of cell, approximated to 12 after origin, or rarely anastomosing with 12. Frenulum and retinaculum present, or absent, being then replaced by a basal costal expansion of hindwings.

Although a family of only moderate size the Drepanidae show a wide range of structure. They are notwithstanding a very natural group and easily recognized. The approximation of 7 to 12 in the hindwings is a characteristic found also in the Cymatophoridae as well as in the Pyraloidea. The anastomosis of these veins, so characteristic of most Pyraloidea is found elsewhere only in a few Drepanidae. I see no reason to doubt that it has been independently developed in both cases. That the Drepanidae are not nearly allied to the Pyraloidea is sufficiently established by the presence of an areole projecting distally from the cell in most genera. Those in which the areole has been lost are derived forms, and the loss has been either by coalescence or (rarely) by loss of the interrarial anastomosis, never by obsolescence of the chorda as in the Pyraloidea. We must indeed refer the Drepanidae to the superfamily Noctuoidea, where, however, they have no close allies, and are aberrant by the relationship of the veins 7 and 12 of the hindwings.

In Australia the family is represented by only three species belonging to three genera, which constitute an aberrant section of the family, for in them proboscis, frenulum, and retinaculum are absent, and the areole is extremely long and narrow, or lost by failure of the interrarial anastomosis. *Oreta* is an Oriental genus represented by ten species in India; the other two genera, though recognized at present in Australia only, are probably Papuan.

Key to Genera.

- | | |
|--|--------------------|
| 1. Hindwings with 7 anastomosing with 12 | 2 |
| Hindwings with 7 after its origin approximated to 12, not anastomosing | <i>Oreta</i> |
| 2. Forewings with 8 absent, 11 anastomosing with 10 | <i>Amphitorna</i> |
| Forewings with 8 present, 11 not anastomosing | <i>Astatochroa</i> |

Gen. 1. AMPHITORNA.

Turn., *Ann. Qld. Mus.*, x, 1911, p. 96.

Tongue absent. Palpi short, porrect; second joint hairy; terminal joint smooth. Antennae laminate; the laminae over 1, in ♂ fused together, in ♀ separate. Tibiae with terminal spurs fairly well developed, the outer spurs shorter; posterior tibiae without middle spurs. Forewings with 8 absent, 7 and 10 arising separately from cell, 9 long-stalked with 10 and anastomosing shortly with 7 to form the areole, which is very narrow and very long, reaching to near apex of wing, 11 arising from shortly before end of cell, and anastomosing with 10 for a considerable distance. Hindwings with second anal absent, 7 arising from upper margin of cell at about two-thirds, and anastomosing with 12 for some distance. Frenulum and retinaculum absent; hindwings with strong basal costal expansion.

Type, *A. lechriodes*. I formerly erroneously identified this species as *fuscimargo* Warr., of which I had not then seen an example.

1. AMPHITORNA LECHRIODES, n. sp.

λεχρωδης, oblique.

♂. 32 mm. Head and thorax reddish-ochreous; face red; upper and lower margins pale-ochreous. Palpi pale-ochreous. Antennae reddish. Abdomen grey-

of cell, or from areole, or stalked with 10. Hindwings with second anal short, running to dorsum, or absent, 1 absent, 5 from near lower angle of cell, 6 and 7 remote at origin, 7 from costal margin of cell, approximated to 12 after origin, or rarely anastomosing with 12. Frenulum and retinaculum present, or absent, being then replaced by a basal costal expansion of hindwings.

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whitish, base of dorsum reddish. Legs pale-ochreous. Forewings triangular, costa strongly arched, apex acute, strongly produced and falcate, termen sinuate, scarcely oblique; reddish-ochreous with some darker irroration; an outwardly-oblique dark-reddish line from two-thirds costa to vein 6, there angled and inwardly oblique to three-fifths dorsum; cilia dark-reddish. Hindwings with termen gently sinuate; as forewings, but transverse line from mid-dorsum straight, not reaching costa.

♀. 38 mm. Like ♂ but pale ochreous-grey without reddish tinge. Wings without oblique line.

North Queensland: Kuranda, near Cairns, in December and April; two specimens received from Mr. F. P. Dodd.

Gen. 2. ASTATOCHROA NOV.

αστατοχροος, unstable in colour.

Tongue absent. Labial palpi very short; hairy towards base. Antennae bipectinate. Forewings with a long areole, or 8 disconnected leaving areole open, 7, 8, 9, 10 stalked, 9 and 10 arising out of 8 near base, or the stalk of 9 and 10 connate with 7 and 8, 6 and 11 connate with preceding veins from upper angle of cell, or 11 approximated only. Hindwings with 4 and 5 approximated from angle of cell, 7 arising from shortly before upper angle and anastomosing with 12 for some distance. Frenulum and retinaculum absent; hindwings with strong basal costal expansion.

According to Warren both 6 and 11 are sometimes stalked with 7, 8, 9, 10.

2. ASTATOCHROA FUSCIMARGO.

Oreta fuscimargo Warr., *Novitates Zoologicae*, 1896, p. 338.—*Oreta pusilla* Warr., *ibid.*, 1900, p. 99.—*Oreta roseola* Warr., *ibid.*, 1900, p. 99.—*Artaza usta* Luc., *Proc. Roy. Soc. Qld.*, 1901, p. 76.

♂, ♀. 22-30 mm. Head and thorax yellow; face reddish-brown. Legs pale-yellow; anterior coxae and femora reddish anteriorly. Forewings triangular, costa moderately arched, apex round-pointed, slightly produced, termen straight; yellow; a whitish discal dot before middle surrounded by reddish suffusion; a fine reddish line from mid-dorsum to discal dot; a similar line from costa before apex, slightly curved outwards beneath costa, thence straight to three-fourths dorsum; variable reddish or fuscous spots or suffusion preceding termen; cilia yellow. Hindwings with termen gently rounded; colour and lines as forewings.

I describe this as the typical form, but the species is very variable in colour and markings. The transverse lines may be absent from both wings. An example from Toowoomba differs as follows: Face reddish. Thorax reddish-brown, anterior edge whitish. Wings reddish-brown. Forewings with no suffusion around discal dot; a fine dark line, edged posteriorly with ochreous, from near apex to three-fourths dorsum; some fuscous strigulae before termen. Hindwings with a dark line from two-thirds dorsum extending three-quarters across disc. Warren himself suggested (*Novitates Zool.*, 1900, p. 98) that the three forms he had described might be one species. I have examined Lucas's type, which is in the South Australian Museum.

North Queensland: Cairns. Queensland: Yeppoon (E. J. Dumigan). Toowoomba (W. B. Barnard), Southport (H. Hacker). New South Wales: Port Macquarie (G. M. Goldfinch).

whitish, base of dorsum reddish. Legs pale-ochreous. Forewings triangular, costa strongly arched, apex acute, strongly produced and falcate, termen sinuate, scarcely oblique; reddish-ochreous with some darker irroration; an outwardly-oblique dark-reddish line from two-thirds costa to vein 6, there angled and inwardly oblique to three-fifths dorsum; cilia dark-reddish. Hindwings with termen gently sinuate; as forewings, but transverse line from mid-dorsum straight, not reaching costa.

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♂, ♀. 22-30 mm. Head and thorax yellow; face reddish-brown. Legs pale-yellow; anterior coxae and femora reddish anteriorly. Forewings triangular, costa moderately arched, apex round-pointed, slightly produced, termen straight; yellow; a whitish discal dot before middle surrounded by reddish suffusion; a fine reddish line from mid-dorsum to discal dot; a similar line from costa before apex, slightly curved outwards beneath costa, thence straight to three-fourths dorsum; variable reddish or fuscous spots or suffusion preceding termen; cilia yellow. Hindwings with termen gently rounded; colour and lines as forewings.

I describe this as the typical form, but the species is very variable in colour and markings. The transverse lines may be absent from both wings. An example from Toowoomba differs as follows: Face reddish. Thorax reddish-brown, anterior edge whitish. Wings reddish-brown. Forewings with no suffusion around discal dot; a fine dark line, edged posteriorly with ochreous, from near apex to three-fourths dorsum; some fuscous strigulae before termen. Hindwings with a dark line from two-thirds dorsum extending three-quarters across disc. Warren himself suggested (*Novitates Zool.*, 1900, p. 98) that the three forms he had described might be one species. I have examined Lucas's type, which is in the South Australian Museum.

North Queensland: Cairns. Queensland: Yeppoon (E. J. Dumigan). Toowoomba (W. B. Barnard), Southport (H. Hacker). New South Wales: Port Macquarie (G. M. Goldfinch).

Gen. 3. ORETA.

Wlk., *Cat. Brit. Mus.*, v, p. 1166; Hmps., *Moths India*, i, p. 347.

Tongue absent. Palpi very short, porrect, hairy. Antennae bipectinate in both sexes, the pectinations sometimes fused together in ♂. Terminal tibial spurs very short or absent; posterior tibiae without middle spurs. Femora hairy. Forewings with 2 from before middle of cell, 3 from about midway between 2 and angle, 3 and 4 approximated from angle, 6 from upper angle, 7 and 8 long-stalked to near apex, 9, 10, 11 stalked, 9 anastomosing with 8, or with 7, 8 shortly before bifurcation, forming a very narrow, very long areole, which reaches to near apex. Hindwings with second anal absent, 7 from costal margin of cell at about two-thirds, approximated to 12 after its origin. Frenulum and retinaculum absent; hindwings with strong basal costal expansion.

There is some variation in antennal and tibial structure, but there seems to be no need to divide the genus as here defined.

Type, *O. extensa* Wlk., from India.

3. ORETA JASPIDEA.

Cobanilla jaspidea Warr., *Novit. Zoolog.*, 1896, p. 335.—*C. erminea* Warr., *ibid.*, 1899, p. 1.—*Oreta miltodes* Low., *Trans. Roy. Soc. S. Aust.*, 1903, p. 29.—*O. hypocalia* Low., *ibid.*, 1905, p. 179.

♂. 37-40 mm. ♀. 50 mm. Head ochreous; forehead and face bright red becoming ochreous towards basal margin. Antennae ochreous-grey. Thorax ochreous-grey, sometimes reddish-tinged. Abdomen, dorsum as thorax; beneath reddish. Legs ochreous, sometimes reddish-tinged; anterior pair mostly red. Forewings triangular, costa straight to three-fourths, thence strongly arched, apex strongly produced and obtusely falcate, termen nearly straight or slightly sinuate; pale-ochreous or reddish with numerous darker transverse striae; usually a paler basal blotch, sometimes sharply defined with its posterior edge from one-third costa obliquely outwards, sharply angled inwards beneath costa, and rounded to near base of dorsum; sometimes a more darkly shaded median band, which may contain one or two minute whitish discal dots; sometimes a pale costal patch, rather narrow, from two-thirds costa to apex; apex sometimes with some fuscous and whitish irroration; sometimes an oblique fuscous line, which may be edged posteriorly with whitish, from apex to two-thirds dorsum; cilia dark-reddish. Hindwings with termen rounded, tornus prominent and rounded-rectangular; colour, striae, and cilia as forewings; a minute median whitish discal dot, and sometimes a few similar dots in disc; striae near apex sometimes fuscous. Underside similar, but more reddish or orange; oblique line on forewings distinct.

A variable species, both in coloration, details of marking, and especially in development of oblique line on forewings, but in my examples this is always present on underside.

North Queensland: Cooktown (Warren); Kuranda, near Cairns; Townsville in December and January (F. P. Dodd); Mackay (Lower). Also from New Guinea.

Index to Drepanidae.

GENERA.

Amphitorna, 1; Astatochroa, 2; Oreta, 3.

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Index to Drepanidae.

GENERA.

Amphitorna, 1; Astatochroa, 2; Oreta, 3.

SPECIES.

(Synonyms in italics.)

Erminea, 3; *fuscimargo*, 2; *hypocalla*, 3; *jaspidea*, 3; *lechriodes*, 1; *millodes*, 3; *pusilla*, 2; *roseola*, 2; *usta*, 2.

Fam. Limacodidae.

Tongue absent. Forewings with 1 (the second cubital vein) well developed throughout, 8 and 9 always stalked, areole always absent, median vein nearly always present in cell. Hindwing with 12 connected with cell either by vein 11 or by an anastomosis towards base, 1 present, median vein nearly always present in cell.

The palpi are usually short or moderate, rarely long. The antennae are bipectinate (rarely unipectinate) in the male, sometimes to apex, but usually becoming simple (sometimes abruptly) long before apex. The thorax and abdomen are stout, and the former is very rarely crested. The legs are densely hairy, the spurs being often short and concealed, with the middle spurs absent; rarely all spurs are absent.* The median vein is sometimes forked in the forewing but often single; in the hindwing single or very rarely stalked. Veins 2, 3, 4, 5 are always present and well separated at origin, at least in Australian genera.

The larvae are highly specialized, being without abdominal prolegs, either smooth-skinned or sparsely spined, and sometimes with several groups of protrusible stinging hairs. The pupae are closely enclosed in smooth oval cocoons from which the imago emerges through the dehiscence of a circular lid at one extremity. Usually these are freely exposed, or found under loose bark, but in some species, as has been shown by Mr. W. H. Matthews, of Perth, in the case of *Anaxidea lactea*, are formed underground.

The Limacodidae are a family of moderate size characteristic of tropical regions and rare in the temperate zones, but of world-wide distribution in continental regions. They form a compact group of early origin but in many ways specialized. Primitive characters are the retention of the second cubital and median veins; specialized characters, the absence of the tongue and of the areole in the forewings. With the Psychidae they form the superfamily Psychoidea. The absence of the areole is due to coalescence, which is already present in the pupal neuration, for Dr. R. J. Tillyard informs me that in the pupal tracheation of *Doratifera* the third and fourth radial tracheae (corresponding to veins 9 and 8) in the forewings have coalesced at their bases. Formerly I included the Zygaenidae in the Psychoidea, but, for reasons which will be given presently, am now satisfied that this was an error.

Owing to the compact relationships of the various genera the internal classification of the family presents some difficulty. Primarily it may be divided into genera in which 11 of the hindwings unites 12 with the cell, and those in which 11 has disappeared and been replaced by an anastomosis. In *Doratifera* and *Lamprolepida* this anastomosis is prolonged to or beyond the middle of the cell. The origin of vein 10 is of no value for generic determination, as it varies in many species; that of 7 is more constant, and may be used with caution. The presence or absence of middle tibial spurs, or rarely the absence of all spurs, furnishes reliable characters, though, as already noted, they are sometimes difficult of observation.

* On account of the hairiness, descaling may be necessary to demonstrate this.

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Key to Genera.

1. Hindwings with 11 absent, 12 anastomosing with cell 2
Hindwings with 11 present, 12 not anastomosing 12
2. Hindwings with 12 anastomosing to or beyond middle 3
Hindwings with 12 anastomosing near base or before middle 4
3. Tibiae without spurs *Lamprolepida*
Tibiae with terminal spurs *Doratifera*
4. Hindwings with 6 and 7 connate or stalked 5
Hindwings with 6 and 7 widely separate at origin *Anapaea*
5. Forewings with 10 absent *Apodecta*
Forewings with 10 present 6
6. Forewings with 7 connate or stalked with 8, 9 7
Forewings with 7 separate 11
7. Palpi porrect 8
Palpi ascending 10
8. Posterior tibiae without middle spurs *Parasa*
Posterior tibiae with middle spurs 9
9. Antennae of ♂ unipectinate *Ecnomoctena*
Antennae of ♂ bipectinate *Thosea*
10. Palpi short, closely appressed to and not exceeding middle of frons *Chalcoscelis*
Palpi long (2 or more), obliquely ascending *Anepopsia*
11. Posterior tibiae without middle spurs *Hypoblechra*
Posterior tibiae with middle spurs *Birhama*
12. Posterior tibiae without middle spurs 13
Posterior tibiae with middle spurs 14
13. Palpi very long, dilated by hairs at apex *Scopelodes*
Palpi short or moderate, not dilated at apex *Anaxidea*
14. Palpi very long (4 to 6) 15
Palpi short or moderate 16
15. Size large; hindwings with 11 from towards base of cell *Hedraea*
Size very small; hindwings with 11 from middle of cell *Elassoptila*
16. Thorax crested *Hypselolopha*
Thorax not crested *Susiza*

Gen. 1. LAMPROLEPIDA, NOV.

λαμπρολεπίδος, with brilliant scales.

Lamprolepis Feld., *Reise Novara* (nomen nudum).

Palpi moderate, porrect, thickened with appressed hairs; terminal joint short, concealed. Antennae of ♂ with a double row of long pectinations towards base, towards apex simple. Legs densely hairy; tibiae without spurs. Forewings with a single median vein in cell, 7, 8, 9 stalked, 10 connate or short-stalked. Hindwings with a single median vein in cell, costal edge of cell about four-fifths, 6 and 7 stalked, 12 anastomosing with cell from near base to about four-fifths.

Type *L. chrysochroa* Feld. A development of *Doratifera* differing in the loss of the tibial spurs. This I have verified by descaling. It differs also in the longer anastomosis of 12 of hindwings with cell.

1. LAMPROLEPIDA CHRYSOCHROA.

Lamprolepis chrysochroa Feld., *Reise Novara*, Pl. 82, f. 13.—*Doratifera euchrysa* Low., *Trans. Roy. Soc. S. Aust.*, 1896, p. 152.

♂. 28-30 mm. ♀. 34-40 mm. Head reddish-brown. Palpi in ♂ 1½, in ♀ 2½; dark-brown, upper surface reddish-brown. Antennae reddish-brown; in ♂ with long pectinations at base ceasing rather abruptly in middle. Thorax reddish-brown, laterally and posteriorly dark-brown. Abdomen and legs dark-brown. Forewings semi-oval, costa straight to near apex, apex round-pointed, termen obliquely rounded; dark golden with metallic lustre; dorsal edge dark brown;

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an oblique dark brown line from costa before apex to above one-third dorsum; a narrow dark brown terminal fascia with darker anterior edge, broadest at apex, narrowing to a point above tornus; cilia dark brown. Hindwings with termen nearly straight in ♂, rounded in ♀; ochreous-brown; cilia ochreous-brown.

North Queensland: Thursday Island, Cape York, Cairns, Herberton, Palm Islands, Townsville, Mackay.

Gen. 2. DORATIFERA.

Westw., Duncan, *Nat. Libr. Exot. Moths*, 1841, p. 181.

Palpi porrect, short or moderately long, hairy. Antennae of ♂ bipectinate towards base, pectinations long, apical half or more simple, or rarely very shortly pectinated. Tibial spurs short, concealed; posterior tibiae without middle spurs. Forewings with a single median vein in cell, 7, 8, 9 stalked, 10 approximated, connate, or stalked with them from upper angle of cell. Hindwings with a single median vein in cell, upper margin of cell three-fourths to five-sixths, 6 and 7 stalked, 11 absent, 12 anastomosing with cell as far as middle.

The stalking of vein 10 of the forewings is a variable character in several species.

Type *D. vulnerans* Lewin.

Key to Species.

- | | |
|---|----------------------|
| 1. Forewings grey-whitish | 2 |
| Forewings not grey-whitish | 4 |
| 2. Forewings wholly grey-whitish | 3 |
| Forewings with reddish-brown subterminal fascia | <i>ochroptila</i> |
| 3. Antennal pectinations of ♂ ceasing at two-fifths; hindwings white | <i>olorina</i> |
| Antennal pectinations of ♂ extending to three-fourths; hindwings grey | <i>pinguis</i> |
| 4. Thorax and abdomen partly red or orange | 5 |
| Thorax and abdomen not partly red or orange | 6 |
| 5. Forewings of ♂ partly hyaline, or with pale-grey terminal band | <i>oxlei</i> |
| Forewings not hyaline and without terminal band | <i>corallina</i> |
| 6. Forewings with narrow grey terminal band | <i>vulnerans</i> |
| Forewings without grey terminal band | 7 |
| 7. Forewings with dark-fuscous dots, but without whitish streak from apex | 8 |
| Forewings without spots, but with whitish streak from apex | <i>unicolor</i> |
| 8. Antennal pectinations of ♂ ceasing before middle; in ♀ forewing spots not outlined
with yellowish | <i>quadriguttata</i> |
| Antennal pectinations of ♂ extending to two-thirds; in ♀ forewing spots outlined
with yellowish | <i>casta</i> |

2. DORATIFERA OXLEI.

Bombyx oxlei Newm., *Zoologist*, 1855, App. p. 211.—*Panisa circumdata* Wlk., *Cat. Brit. Mus.*, iv, p. 969.—*Anapaea confusa* Wlk., *ibid.*, v, p. 1117.

♂. 23-26 mm. Head reddish. Palpi 1; brownish. Antennae reddish-brown; pectinations long at base, becoming very short rather abruptly about middle, but continued almost to apex. Thorax fuscous-brown; anterior edge and two longitudinal lines red. Abdomen fuscous-brown; dorsum of basal segment red; tuft whitish. Legs fuscous-brown; anterior tibiae and all tarsi annulated with whitish. Forewings semi-oval, costa sinuate, apex round-pointed, termen obliquely rounded; fuscous-brown, semi-hyaline except on margins and veins; cilia fuscous-brown. Hindwings with termen slightly rounded; as forewings.

♀. 42-50 mm. Head reddish-brown. Palpi 1 to 1½; reddish-brown. Antennae reddish-brown. Thorax reddish-brown; lateral margins dark-brown. Abdomen reddish-brown. Legs as in ♂. Forewings with costa straight to near apex; dark

an oblique dark brown line from costa before apex to above one-third dorsum; a narrow dark brown terminal fascia with darker anterior edge, broadest at apex, narrowing to a point above tornus; cilia dark brown. Hindwings with termen nearly straight in ♂, rounded in ♀; ochreous-brown; cilia ochreous-brown.

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Type *D. vulnerans* Lewin.

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| Forewings not hyaline and without terminal band | <i>corallina</i> |
| 6. Forewings with narrow grey terminal band | <i>vulnerans</i> |
| Forewings without grey terminal band | 7 |
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♀. 42-50 mm. Head reddish-brown. Palpi 1 to 1½; reddish-brown. Antennae reddish-brown. Thorax reddish-brown; lateral margins dark-brown. Abdomen reddish-brown. Legs as in ♂. Forewings with costa straight to near apex; dark

brown with paler transverse strigulae; a grey-whitish or grey terminal fascia, moderately broad at apex, narrowing gradually to tornus; cilia grey-whitish. Hindwings with termen rounded; grey, brownish towards base, sometimes wholly brownish; cilia grey-whitish.

There is considerable sexual disparity both in size and colour.

Queensland: Mt. Tambourine. New South Wales: Glen Innes, Sydney, Jervis Bay. Victoria: Melbourne, Wandin, Moe, Gisborne, Euroa. Western Australia: Perth. Tasmania: Hobart.

3. DORATIFERA VULNERANS.

Bombyx vulnerans Lewin, *Prodr. Ent.*, 1805, p. 5, Pl. 4.

♂. 32-34 mm. ♀. 36-43 mm. Head brownish with a small tuft of white scales in front of antennae. Palpi in ♂ 1, in ♀ 2; brownish, apex whitish. Antennae brownish; in ♂ with long pectinations at base, ceasing rather abruptly at about one-third. Thorax and abdomen brownish. Legs brownish; anterior tibiae and tarsi with white dots on dorsal surface. Forewings semi-oval, costa straight to near apex, in ♂ slightly sinuate, apex rounded, termen obliquely rounded; dark reddish-brown with transverse corrugations giving the appearance of lustrous strigulae; a whitish transverse mark on end of cell; veins slenderly whitish; a narrow, whitish-grey, terminal fascia, broadest on costa, gradually narrowing to tornus; a brownish terminal line; cilia whitish with a median grey line.

Northern Territory: Darwin. North Queensland: Cape York, Cairns, Herberton, Townsville. Queensland: Rockhampton, Maryborough, Brisbane, Toowoomba. New South Wales: Lismore, Tabulam, Newcastle, Sydney, Jervis Bay, Mittagong. Victoria: Melbourne. South Australia: Adelaide. Western Australia: Perth.

4. DORATIFERA OCHROPTILA, n. sp.

ὠχροπτεῖλος, pale-winged.

♀. 36 mm. Head and palpi ochreous-whitish. Antennae ochreous-whitish; in ♀ simple. Thorax and abdomen whitish-ochreous. Legs ochreous-whitish. Forewings rather elongate, costa straight, apex rounded, termen obliquely rounded; grey-whitish with some brownish suffusion and lustrous striations; a reddish-brown subterminal fascia intersected by grey-whitish veins and not reaching margins, narrow but wider between veins 5 and 6; a narrow whitish-grey terminal fascia widest in middle; cilia whitish-grey. Hindwings with termen rounded; whitish; cilia whitish.

Near *D. vulnerans*, but with whitish hindwings, and much paler forewings.

N.W. Australia: Sherlock River; one specimen in the British Museum. A second ♀ example from Bernier Island, Sharks' Bay, is in Coll. Lyell.

5. DORATIFERA OLORINA, n. sp.

olorinus, swan-like.

♂. 26-30 mm. ♀. 38-42 mm. Head whitish. Palpi under 1, with loosely appressed hairs; whitish. Antennae grey-whitish; in ♂ with long pectinations towards base, ceasing abruptly at two-fifths, thence serrate or simple; in ♀ simple. Thorax and abdomen whitish, often tinged with grey on dorsum; underside of abdomen in ♀ blackish. Legs whitish-grey. Forewings semi-oval, costa in ♂ sinuate, in ♀ straight to near apex, apex rounded, termen obliquely rounded, whitish-grey with lustrous transverse corrugations; veins outlined with whitish; a broad grey line, interrupted by veins, from beyond cell at two-thirds to mid-

brown with paler transverse strigulae; a grey-whitish or grey terminal fascia, moderately broad at apex, narrowing gradually to tornus; cilia grey-whitish. Hindwings with termen rounded; grey, brownish towards base, sometimes wholly brownish; cilia grey-whitish.

There is considerable sexual disparity both in size and colour.

Queensland: Mt. Tambourine. New South Wales: Glen Innes, Sydney, Jervis Bay. Victoria: Melbourne, Wandin, Moe, Gisborne, Euroa. Western Australia: Perth. Tasmania: Hobart.

3. DORATIFERA VULNERANS.

Bombyx vulnerans Lewin, *Prodr. Ent.*, 1805, p. 5, Pl. 4.

♂. 32-34 mm. ♀. 36-43 mm. Head brownish with a small tuft of white scales in front of antennae. Palpi in ♂ 1, in ♀ 2; brownish, apex whitish. Antennae brownish; in ♂ with long pectinations at base, ceasing rather abruptly at about one-third. Thorax and abdomen brownish. Legs brownish; anterior tibiae and tarsi with white dots on dorsal surface. Forewings semi-oval, costa straight to near apex, in ♂ slightly sinuate, apex rounded, termen obliquely rounded; dark reddish-brown with transverse corrugations giving the appearance of lustrous strigulae; a whitish transverse mark on end of cell; veins slenderly whitish; a narrow, whitish-grey, terminal fascia, broadest on costa, gradually narrowing to tornus; a brownish terminal line; cilia whitish with a median grey line.

Northern Territory: Darwin. North Queensland: Cape York, Cairns, Herberton, Townsville. Queensland: Rockhampton, Maryborough, Brisbane, Toowoomba. New South Wales: Lismore, Tabulam, Newcastle, Sydney, Jervis Bay, Mittagong. Victoria: Melbourne. South Australia: Adelaide. Western Australia: Perth.

4. DORATIFERA OCHROPTILA, n. sp.

ὤχροπτιλος, pale-winged.

♀. 36 mm. Head and palpi ochreous-whitish. Antennae ochreous-whitish; in ♀ simple. Thorax and abdomen whitish-ochreous. Legs ochreous-whitish. Forewings rather elongate, costa straight, apex rounded, termen obliquely rounded; grey-whitish with some brownish suffusion and lustrous striations; a reddish-brown subterminal fascia intersected by grey-whitish veins and not reaching margins, narrow but wider between veins 5 and 6; a narrow whitish-grey terminal fascia widest in middle; cilia whitish-grey. Hindwings with termen rounded; whitish; cilia whitish.

Near *D. vulnerans*, but with whitish hindwings, and much paler forewings.

N.W. Australia: Sherlock River; one specimen in the British Museum. A second ♀ example from Bernier Island, Sharks' Bay, is in Coll. Lyell.

5. DORATIFERA OLORINA, n. sp.

olorinus, swan-like.

♂. 26-30 mm. ♀. 38-42 mm. Head whitish. Palpi under 1, with loosely appressed hairs; whitish. Antennae grey-whitish; in ♂ with long pectinations towards base, ceasing abruptly at two-fifths, thence serrate or simple; in ♀ simple. Thorax and abdomen whitish, often tinged with grey on dorsum; underside of abdomen in ♀ blackish. Legs whitish-grey. Forewings semi-oval, costa in ♂ sinuate, in ♀ straight to near apex, apex rounded, termen obliquely rounded, whitish-grey with lustrous transverse corrugations; veins outlined with whitish; a broad grey line, interrupted by veins, from beyond cell at two-thirds to mid-

dorsum; a similar subterminal line, suffused anteriorly, defined posteriorly by a broad whitish terminal line; terminal edge grey; cilia whitish. Hindwings with termen rounded; whitish; sometimes a grey terminal line; cilia whitish.

Queensland: Rockhampton, Brisbane, Toowoomba.

6. DORATIFERA PINGUIS.

Pelora pinguis Wlk., *Cat. Brit. Mus.*, v, p. 1119.

♂. 30 mm. ♀. 34 mm. Closely similar to the preceding, but of a somewhat deeper grey. Antennae of ♂ bipectinate, pectinations moderately long at base, shortening very gradually, and extending to about three-fourths. Hindwings grey.

Victoria: Sale. Tasmania: Launceston, Ulverstone, Hobart, Triabunna.

7. DORATIFERA QUADRIGUTTATA.

Anapaea quadriguttata Wlk., *Cat. Brit. Mus.*, v, 1855, p. 1117.—*Doratifera lewini* Scott, *Aust. Lep.*, 1864, p. 17, Pl. 6.

♂. 24-34 mm. ♀. 34-42 mm. Head reddish-brown. Palpi in ♂ 1, in ♀ 1½; reddish-brown. Antennae reddish-brown; in ♂ with moderate pectinations at base ceasing rather abruptly at two-fifths. Thorax reddish-brown. Abdomen in ♂ dark-brown, in ♀ brownish-ochreous. Legs brown. Forewings semi-oval, costa straight to near apex, in ♂ slightly sinuate, apex round-pointed, termen slightly rounded, oblique; reddish-brown, surface corrugated to form paler lustrous transverse strigulations; usually an oblique series of dark-fuscous dots running in a line from above mid-dorsum to before apex, two or three above and two or three beneath middle, often only the two last are developed, and occasionally all are absent; cilia reddish-brown. Hindwings with termen rounded; brownish-ochreous, paler towards base; cilia brownish-ochreous.

Northern Territory: Mary River, Newcastle Waters. North Queensland: Cairns, Townsville. Queensland: Eidsvold, Brisbane, Toowoomba. New South Wales: Glen Innes, Newcastle, Sydney, Bathurst, Nyngan. Victoria: Sale, Wandin, Wangaratta. South Australia: Adelaide. Western Australia: Perth. Northwest Australia: Hammersley Range.

8. DORATIFERA CASTA.

Scott, *Aust. Lepid.*, p. 18, Pl. vi.

From Scott's excellent plates it is evident that the larva of this species is very different from that of *quadriguttata*, but the moths are hardly distinguishable. This has been confirmed by Mr. J. A. Kershaw, of Melbourne, and Mr. H. Hacker, of Brisbane. The larva of *casta* is velvety-black with numerous creamy-white spots and spines; that of *quadriguttata* is green with lozenge-shaped red markings, its spines are also green, except the anterior and posterior pairs, which are red.

Unless the larvae were known, no one would have suspected the existence of two species. So far as my material enables me to judge there is a slight difference in the structure of the antennae in the ♂; in *quadriguttata* the inner row of pectinations does not extend beyond the middle; in *casta* they extend to about two-thirds. I am unable to point out any other constant difference. In *quadriguttata* the hindwings are usually, but not always paler towards base; this is not so in *casta*. Both species vary in the number of dark spots on the forewings, but in *casta* these are uniformly outlined with yellowish in both sexes, in *quadriguttata* these yellowish rings appear to be developed only in the male, not at all, or very rarely in the female.

dorsum; a similar subterminal line, suffused anteriorly, defined posteriorly by a broad whitish terminal line; terminal edge grey; cilia whitish. Hindwings with termen rounded; whitish; sometimes a grey terminal line; cilia whitish.

Queensland: Rockhampton, Brisbane, Toowoomba.

6. DORATIFERA PINGUIS.

Pelora pinguis Wlk., *Cat. Brit. Mus.*, v, p. 1119.

♂. 30 mm. ♀. 34 mm. Closely similar to the preceding, but of a somewhat deeper grey. Antennae of ♂ bipectinate, pectinations moderately long at base, shortening very gradually, and extending to about three-fourths. Hindwings grey.

Victoria: Sale. Tasmania: Launceston, Ulverstone, Hobart, Triabunna.

7. DORATIFERA QUADRIGUTTATA.

Anapaea quadriguttata Wlk., *Cat. Brit. Mus.*, v, 1855, p. 1117.—*Doratifera lewini* Scott, *Aust. Lep.*, 1864, p. 17, Pl. 6.

♂. 24-34 mm. ♀. 34-42 mm. Head reddish-brown. Palpi in ♂ 1, in ♀ 1½; reddish-brown. Antennae reddish-brown; in ♂ with moderate pectinations at base ceasing rather abruptly at two-fifths. Thorax reddish-brown. Abdomen in ♂ dark-brown, in ♀ brownish-ochreous. Legs brown. Forewings semi-oval, costa straight to near apex, in ♂ slightly sinuate, apex round-pointed, termen slightly rounded, oblique; reddish-brown, surface corrugated to form paler lustrous transverse strigulations; usually an oblique series of dark-fuscous dots running in a line from above mid-dorsum to before apex, two or three above and two or three beneath middle, often only the two last are developed, and occasionally all are absent; cilia reddish-brown. Hindwings with termen rounded; brownish-ochreous, paler towards base; cilia brownish-ochreous.

Northern Territory: Mary River, Newcastle Waters. North Queensland: Cairns, Townsville. Queensland: Eidsvold, Brisbane, Toowoomba. New South Wales: Glen Innes, Newcastle, Sydney, Bathurst, Nyngan. Victoria: Sale, Wandin, Wangaratta. South Australia: Adelaide. Western Australia: Perth. Northwest Australia: Hammersley Range.

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From Scott's excellent plates it is evident that the larva of this species is very different from that of *quadriguttata*, but the moths are hardly distinguishable. This has been confirmed by Mr. J. A. Kershaw, of Melbourne, and Mr. H. Hacker, of Brisbane. The larva of *casta* is velvety-black with numerous creamy-white spots and spines; that of *quadriguttata* is green with lozenge-shaped red markings, its spines are also green, except the anterior and posterior pairs, which are red.

Unless the larvae were known, no one would have suspected the existence of two species. So far as my material enables me to judge there is a slight difference in the structure of the antennae in the ♂; in *quadriguttata* the inner row of pectinations does not extend beyond the middle; in *casta* they extend to about two-thirds. I am unable to point out any other constant difference. In *quadriguttata* the hindwings are usually, but not always paler towards base; this is not so in *casta*. Both species vary in the number of dark spots on the forewings, but in *casta* these are uniformly outlined with yellowish in both sexes, in *quadriguttata* these yellowish rings appear to be developed only in the male, not at all, or very rarely in the female.

Queensland: Duaringa, Caloundra, Brisbane, Stradbroke I. New South Wales: Newcastle, Bathurst. Victoria: Stawell.

9. DORATIFERA CORALLINA.

Parasa corallina Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 192.

A ♂ in Coll. Lyell shows the following differences from the ♀ type:—25 mm. Antennae bipectinate, pectinations moderately long towards base, ceasing rather abruptly about middle. Head and thorax dark reddish-purple, anterior edge of thorax bright-red. Abdomen pale-reddish-ochreous with a bright-red basal dorsal spot. Forewings with 7, 8, 9, 10 stalked.

Northern Territory: Darwin. North Queensland: Townsville.

10. DORATIFERA UNICOLOR.

Doratifera unicolora Swin., *Ann. Mag. Nat. Hist.* (7) ix, 1902, p. 418.—*Doratifera stenora* Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 189.

Queensland: Rockhampton. Northwest Australia: Roeburne, Broome.

Gen. 3. APODECTA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 189.

Palpi moderately long, porrect; second joint thickened with closely appressed scales. Antennae of ♂ bipectinate towards base, pectinations long, apical two-fifths simple. Tibial spurs rather long, not concealed; posterior tibiae with middle spurs well developed. Forewings with a single median vein in cell, 7, 8, 9, usually stalked, but 7 sometimes connate or separate, 10 absent. Hindwings with a single median vein in cell, costal edge of cell three-fourths, 6 and 7 stalked, 11 absent, 12 anastomosing with cell from near base to about one-third.

Type, *A. monodisca* Turn.

11. APODECTA MONODISCA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 189.—*Anisobathra actinias* Low., *ibid.*, p. 221.

Northern Territory: Melville I. North Queensland: Thursday I., Cairns, Townsville, Mackay. Queensland: Westwood, Stradbroke I.

Gen. 4. PARASA.

Moore, *Lep. East India Co.*, 1859, p. 413.

Palpi moderate, porrect, clothed with appressed hairs. Antennae of ♂ bipectinate towards base, pectinations long, apical half or one-third simple, or with short pectinations to apex; of ♀ simple, or shortly bipectinate to three-fourths. Thorax sometimes with a small posterior crest. Tibial spurs short, not concealed; posterior tibiae without middle spurs. Forewings with single or forked median vein in cell, 7 connate or stalked with 8, 9, 10 separate, connate, or stalked. Hindwings with median vein in cell shortly forked, costal edge of cell about four-fifths, 6 and 7 stalked, 11 absent, 12 anastomosing with cell before middle, sometimes a series of branching pseudoneuria from 12 towards costa. Type, *P. lepida* Cram. from India.

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| 1. Forewings with whitish oblique median line more or less developed | 2 |
| Forewings without whitish median line | 5 |
| 2. Forewings with median line dentate (in ♀ broadly suffused) | <i>atmodes</i> |
| Forewings with median line narrow, not dentate | 3 |
| 3. Forewings whitish or grey, purplish-tinged | <i>entima</i> |
| Forewings reddish-brown or brownish | 4 |

Queensland: Duaringa, Caloundra, Brisbane, Stradbroke I. New South Wales: Newcastle, Bathurst. Victoria: Stawell.

9. DORATIFERA CORALLINA.

Parasa corallina Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 192.

A ♂ in Coll. Lyell shows the following differences from the ♀ type:—25 mm. Antennae bipectinate, pectinations moderately long towards base, ceasing rather abruptly about middle. Head and thorax dark reddish-purple, anterior edge of thorax bright-red. Abdomen pale-reddish-ochreous with a bright-red basal dorsal spot. Forewings with 7, 8, 9, 10 stalked.

Northern Territory: Darwin. North Queensland: Townsville.

10. DORATIFERA UNICOLOR.

Doratifera unicolora Swin., *Ann. Mag. Nat. Hist.* (7) ix, 1902, p. 418.—*Doratifera stenora* Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 189.

Queensland: Rockhampton. Northwest Australia: Roeburne, Broome.

Gen. 3. APODECTA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 189.

Palpi moderately long, porrect; second joint thickened with closely appressed scales. Antennae of ♂ bipectinate towards base, pectinations long, apical two-fifths simple. Tibial spurs rather long, not concealed; posterior tibiae with middle spurs well developed. Forewings with a single median vein in cell, 7, 8, 9, usually stalked, but 7 sometimes connate or separate, 10 absent. Hindwings with a single median vein in cell, costal edge of cell three-fourths, 6 and 7 stalked, 11 absent, 12 anastomosing with cell from near base to about one-third.

Type, *A. monodisca* Turn.

11. APODECTA MONODISCA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 189.—*Anisobathra actinias* Low., *ibid.*, p. 221.

Northern Territory: Melville I. North Queensland: Thursday I., Cairns, Townsville, Mackay. Queensland: Westwood, Stradbroke I.

Gen. 4. PARASA.

Moore, *Lep. East India Co.*, 1859, p. 413.

Palpi moderate, porrect, clothed with appressed hairs. Antennae of ♂ bipectinate towards base, pectinations long, apical half or one-third simple, or with short pectinations to apex; of ♀ simple, or shortly bipectinate to three-fourths. Thorax sometimes with a small posterior crest. Tibial spurs short, not concealed; posterior tibiae without middle spurs. Forewings with single or forked median vein in cell, 7 connate or stalked with 8, 9, 10 separate, connate, or stalked. Hindwings with median vein in cell shortly forked, costal edge of cell about four-fifths, 6 and 7 stalked, 11 absent, 12 anastomosing with cell before middle, sometimes a series of branching pseudoneuria from 12 towards costa. Type, *P. lepida* Cram. from India.

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|--|----------------|
| 1. Forewings with whitish oblique median line more or less developed | 2 |
| Forewings without whitish median line | 5 |
| 2. Forewings with median line dentate (in ♀ broadly suffused) | <i>atmodes</i> |
| Forewings with median line narrow, not dentate | 3 |
| 3. Forewings whitish or grey, purplish-tinged | <i>entima</i> |
| Forewings reddish-brown or brownish | 4 |

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| 4. Forewings with a dark line from costa to termen | <i>callidesma</i> |
| Forewings without line from costa to termen | <i>bombycoides</i> |
| 5. Forewings marked with numerous dark lines | 6 |
| Forewings not marked with numerous dark lines | 7 |
| 6. Forewings with a sinuate sub-basal line to one-fourth dorsum | <i>paroa</i> |
| Forewings with a subdorsal line from base to middle | <i>neurocausta</i> |
| 7. Forewings with a short oblique streak from dorsum before middle | <i>alphaea</i> |
| Forewings without oblique dorsal streak | 8 |
| 8. Hindwings reddish-brown | <i>pyrrhothrix</i> |
| Hindwings pale-grey | <i>acrata</i> |

12. PARASA ATMODES.

♂, Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 192.—♀ *P. loxoleuca* Turn., *Trans. Roy. Soc. S. Aust.*, 1904, p. 242.

In the ♂ the median white line is very slender and finely dentate; in the ♀ it forms a broad fascia dentate on posterior edge.

North Queensland: Cape York, Laura, Cairns, Townsville. Queensland: Brisbane, Dalby.

13. PARASA BOMBYCOIDES.

Lethocephala bombycoides Feld., *Reise Novara*, Pl. 83, f. 14.—*Thosea luxa* Swin., *Ann. Mag. Nat. Hist.* (7), ix, 1902, p. 165.—*T. erecta*, Swin., *ibid.*, p. 418.—*Doratiphora amphibrota* Low., *Trans. Roy. Soc. S. Aust.*, 1902, p. 216.—*D. sphenosema* Low., *ibid.*, p. 217.

♂. 19-24 mm. ♀. 26-32 mm. Head, thorax, and abdomen reddish-brown, dark brown, or whitish-brown. Palpi under 1; reddish-brown or whitish-brown. Antennae brownish; in ♂ with long basal pectinations, which shorten rather abruptly at two-thirds, but are continued to apex; in ♀ the pectinations are much shorter, and diminish gradually to apex. Legs brownish. Forewings with costa straight, apex rounded, termen rounded, slightly oblique; 7 usually connate, sometimes stalked, 10 separate; reddish-brown, ochreous-brown, or whitish-brown; a straight whitish streak from one-third dorsum to costa beyond middle, often conspicuous sometimes partly obsolete, or even absent; in ♂ usually a suffused darker circular spot in disc at three-fourths, but this is sometimes obsolete; sometimes a greyish suffusion along termen; cilia concolorous. Hindwings with termen strongly rounded; brown or brown-whitish.

Very variable in colour and development of markings, but not difficult of recognition, especially if attention be paid to antennal structure.

Northern Territory: Darwin, Mary River, Tennant's Creek. North Queensland: Thursday Island, Claudie River, Cooktown. Northwest Australia: Roeburne, Sherlock River, Hammersley Range.

14. PARASA CALLIDESMA.

Lethocephala ? callidesma Low., *Trans. Roy. Soc. S. Aust.*, 1896, p. 153.

♂. 26-36 mm. Head and palpi dark-brown. Thorax with a small posterior crest; dark-brown, anterior edge and centre reddish-brown, crest whitish edged with blackish. Antennae ochreous-brown; in ♂ with long pectinations in basal half, becoming short beyond middle, but continued to apex. Abdomen and legs brown or grey-brown. Forewings triangular, costa straight to near apex, apex rounded, termen rounded, slightly oblique; 7 connate or stalked, 10 separate; dark-brown; a darker basal area sharply defined by an oblique whitish line from one-third dorsum towards, but not reaching, four-fifths costa; a fuscous line from four-fifths costa to termen below middle, slightly inwardly curved; cilia brown,

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| 4. Forewings with a dark line from costa to termen | <i>callidesma</i> |
| Forewings without line from costa to termen | <i>bombycoides</i> |
| 5. Forewings marked with numerous dark lines | 6 |
| Forewings not marked with numerous dark lines | 7 |
| 6. Forewings with a sinuate sub-basal line to one-fourth dorsum | <i>paroa</i> |
| Forewings with a subdorsal line from base to middle | <i>neurocausta</i> |
| 7. Forewings with a short oblique streak from dorsum before middle | <i>alphaea</i> |
| Forewings without oblique dorsal streak | 8 |
| 8. Hindwings reddish-brown | <i>pyrrhothrix</i> |
| Hindwings pale-grey | <i>acrata</i> |

12. PARASA ATMODES.

♂, Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 192.—♀ *P. loxoleuca* Turn., *Trans. Roy. Soc. S. Aust.*, 1904, p. 242.

In the ♂ the median white line is very slender and finely dentate; in the ♀ it forms a broad fascia dentate on posterior edge.

North Queensland: Cape York, Laura, Cairns, Townsville. Queensland: Brisbane, Dalby.

13. PARASA BOMBYCOIDES.

Lethocephala bombycoides Feld., *Reise Novara*, Pl. 83, f. 14.—*Thosea luxa* Swin., *Ann. Mag. Nat. Hist.* (7), ix, 1902, p. 165.—*T. erecta*, Swin., *ibid.*, p. 418.—*Doratiphora amphibrota* Low., *Trans. Roy. Soc. S. Aust.*, 1902, p. 216.—*D. sphenosema* Low., *ibid.*, p. 217.

♂. 19-24 mm. ♀. 26-32 mm. Head, thorax, and abdomen reddish-brown, dark brown, or whitish-brown. Palpi under 1; reddish-brown or whitish-brown. Antennae brownish; in ♂ with long basal pectinations, which shorten rather abruptly at two-thirds, but are continued to apex; in ♀ the pectinations are much shorter, and diminish gradually to apex. Legs brownish. Forewings with costa straight, apex rounded, termen rounded, slightly oblique; 7 usually connate, sometimes stalked, 10 separate; reddish-brown, ochreous-brown, or whitish-brown; a straight whitish streak from one-third dorsum to costa beyond middle, often conspicuous sometimes partly obsolete, or even absent; in ♂ usually a suffused darker circular spot in disc at three-fourths, but this is sometimes obsolete; sometimes a greyish suffusion along termen; cilia concolorous. Hindwings with termen strongly rounded; brown or brown-whitish.

Very variable in colour and development of markings, but not difficult of recognition, especially if attention be paid to antennal structure.

Northern Territory: Darwin, Mary River, Tennant's Creek. North Queensland: Thursday Island, Claudie River, Cooktown. Northwest Australia: Roeburne, Sherlock River, Hammersley Range.

14. PARASA CALLIDESMA.

Lethocephala ? callidesma Low., *Trans. Roy. Soc. S. Aust.*, 1896, p. 153.

♂. 26-36 mm. Head and palpi dark-brown. Thorax with a small posterior crest; dark-brown, anterior edge and centre reddish-brown, crest whitish edged with blackish. Antennae ochreous-brown; in ♂ with long pectinations in basal half, becoming short beyond middle, but continued to apex. Abdomen and legs brown or grey-brown. Forewings triangular, costa straight to near apex, apex rounded, termen rounded, slightly oblique; 7 connate or stalked, 10 separate; dark-brown; a darker basal area sharply defined by an oblique whitish line from one-third dorsum towards, but not reaching, four-fifths costa; a fuscous line from four-fifths costa to termen below middle, slightly inwardly curved; cilia brown,

apical half sometimes fuscous, extreme apices whitish. Hindwings with termen strongly rounded; brownish; cilia as forewings.

Northern Territory: Adelaide River (J. J. Walker), in British Museum. North Queensland: Cairns, Mackay (Lower). Queensland: Toowoomba, in March; two specimens received from Mr. W. B. Barnard.

15. *PARASA ENTIMA*, n. sp.

έντιμος, esteemed.

♂. 34 mm. ♀. 42-44 mm. Head and palpi reddish-brown; sides of face fuscous-brown. Antennae fuscous; pectinations in ♂ long in basal half, ochreous-tinged, thence gradually diminishing, but continued to apex. Thorax with a small posterior crest; in ♂ grey, shoulder-flaps grey-whitish, crest whitish edged with black; in ♀ grey, an anterior spot and edges of crest reddish-brown. Abdomen fuscous in ♂, grey in ♀, with a median dorsal series of reddish-brown spots. Legs grey; posterior pair whitish. Forewings triangular, costa straight to near apex, apex round-pointed, termen only slightly rounded, slightly oblique; 7 connate, 10 separate; grey, sometimes faintly tinged with purple, in ♂ broadly suffused with whitish over costal area; a straight, oblique, fine, fuscous line from one-third dorsum towards, but sometimes not reaching costa beyond middle, edged posteriorly by a whitish line; slight lustrous corrugations from dorsum; cilia grey, apices whitish. Hindwings with termen rounded; purple-grey; cilia as forewings.

Queensland: Southport in August and September, Toowoomba in March; four specimens received from Mr. W. B. Barnard, who has the type. New South Wales: Lismore, Tuncurry, Newcastle (Scott collection, in Australian Museum).

16. *PARASA PAROA*.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 191.

♂. 24-25 mm. ♀. 30-34 mm. Head ochreous-brown. Palpi fuscous or brown. Antennae brownish; in ♂ with long pectinations (5) ceasing abruptly at three-fifths, apical two-fifths simple. Thorax dark-brown, sometimes with some whitish hairs. Abdomen ochreous-brown. Legs brown or fuscous, sometimes with some whitish hairs. Forewings broadly triangular, costa straight to three-fourths, thence arched, apex rounded, termen rounded, slightly oblique, 10 usually stalked, sometimes connate; dark reddish-brown, sometimes with some whitish suffusion; markings dark fuscous; a sinuate line from above middle near base to one-fourth dorsum; a straight transverse line from lower edge of cell at one-third to fold; an outwardly curved line from midcosta half-way across disc; closely preceding this an inwardly curved line from beneath costa obliquely outwards to join postmedian line; postmedian from three-fourths costa, finely dentate on veins, at first transverse, then bent inwards to dorsum at three-fourths; veins in posterior part of disc more or less defined by dark scales; a fine terminal line; cilia brown, bases paler, apices rarely whitish. Hindwings with termen rounded; pale-brown; cilia brown.

Northern Territory: Darwin in November, December, and February. North Queensland: Cairns. Queensland: Duarina, Brisbane.

17. *PARASA NEUROCAUSTA*, n. sp.

νευροκαυστος, with scorched veins.

♂. 21-26 mm. ♀. 30 mm. Head and thorax ochreous-brown or reddish-brown. Palpi under 1; brown. Antennae pale-brown; pectinations in ♂ 6, apical two-fifths

apical half sometimes fuscous, extreme apices whitish. Hindwings with termen strongly rounded; brownish; cilia as forewings.

Northern Territory: Adelaide River (J. J. Walker), in British Museum. North Queensland: Cairns, Mackay (Lower). Queensland: Toowoomba, in March; two specimens received from Mr. W. B. Barnard.

15. *PARASA ENTIMA*, n. sp.

έντιμος, esteemed.

♂. 34 mm. ♀. 42-44 mm. Head and palpi reddish-brown; sides of face fuscous-brown. Antennae fuscous; pectinations in ♂ long in basal half, ochreous-tinged, thence gradually diminishing, but continued to apex. Thorax with a small posterior crest; in ♂ grey, shoulder-flaps grey-whitish, crest whitish edged with black; in ♀ grey, an anterior spot and edges of crest reddish-brown. Abdomen fuscous in ♂, grey in ♀, with a median dorsal series of reddish-brown spots. Legs grey; posterior pair whitish. Forewings triangular, costa straight to near apex, apex round-pointed, termen only slightly rounded, slightly oblique; 7 connate, 10 separate; grey, sometimes faintly tinged with purple, in ♂ broadly suffused with whitish over costal area; a straight, oblique, fine, fuscous line from one-third dorsum towards, but sometimes not reaching costa beyond middle, edged posteriorly by a whitish line; slight lustrous corrugations from dorsum; cilia grey, apices whitish. Hindwings with termen rounded; purple-grey; cilia as forewings.

Queensland: Southport in August and September, Toowoomba in March; four specimens received from Mr. W. B. Barnard, who has the type. New South Wales: Lismore, Tuncurry, Newcastle (Scott collection, in Australian Museum).

16. *PARASA PAROA*.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 191.

♂. 24-25 mm. ♀. 30-34 mm. Head ochreous-brown. Palpi fuscous or brown. Antennae brownish; in ♂ with long pectinations (5) ceasing abruptly at three-fifths, apical two-fifths simple. Thorax dark-brown, sometimes with some whitish hairs. Abdomen ochreous-brown. Legs brown or fuscous, sometimes with some whitish hairs. Forewings broadly triangular, costa straight to three-fourths, thence arched, apex rounded, termen rounded, slightly oblique, 10 usually stalked, sometimes connate; dark reddish-brown, sometimes with some whitish suffusion; markings dark fuscous; a sinuate line from above middle near base to one-fourth dorsum; a straight transverse line from lower edge of cell at one-third to fold; an outwardly curved line from midcosta half-way across disc; closely preceding this an inwardly curved line from beneath costa obliquely outwards to join postmedian line; postmedian from three-fourths costa, finely dentate on veins, at first transverse, then bent inwards to dorsum at three-fourths; veins in posterior part of disc more or less defined by dark scales; a fine terminal line; cilia brown, bases paler, apices rarely whitish. Hindwings with termen rounded; pale-brown; cilia brown.

Northern Territory: Darwin in November, December, and February. North Queensland: Cairns. Queensland: Duarina, Brisbane.

17. *PARASA NEUROCAUSTA*, n. sp.

νευροκαυστος, with scorched veins.

♂. 21-26 mm. ♀. 30 mm. Head and thorax ochreous-brown or reddish-brown. Palpi under 1; brown. Antennae pale-brown; pectinations in ♂ 6, apical two-fifths

simple, the long pectinations ceasing abruptly. Abdomen reddish-brown. Legs brown. Forewings with costa straight to three-fourths, thence arched, apex rounded, termen nearly straight, slightly oblique; 7, 8, 9, 10 stalked; ochreous-grey, in ♀ pale-ochreous; in ♀ basal part of disc, except on dorsum, is suffused with fuscous-brown; a fine fuscous-brown subdorsal streak to middle; a transverse streak of similar colour from middle of cell to middorsum; a fuscous-brown spot on three-fifths costa prolonged as fine lines along posterior edge of cell and bases of veins proceeding from it; a similar fine subterminal line also giving off short branches on veins; cilia brown-whitish. Hindwings with termen strongly rounded; pale-brown; cilia pale-brown.

Northwest Australia: Sherlock River; four specimens in the British Museum.

18. PARASA ALPHAEA.

Bombyx alphaea Fab., *Syst. Ent.*, iii (1), p. 445.—*Eloasa calida* Wlk., *Cat. Brit. Mus.*, xxxii, p. 494.—*Doratifera congrua* Wlk., *Char. Undesc. Lep.*, p. 20.—*Lethocephala eremospila* Low., *Trans. Roy. Soc. S. Aust.*, 1902, p. 219.

♂. 28-35 mm. ♀. 32-45 mm. Head, thorax, and abdomen brown, in ♀ reddish-brown. Palpi 1; brown. Antennae pale brown; pectinations in ♂ moderately long from base to beyond middle, thence short to apex, in ♀ more shortly bipectinate to apex. Legs brown. Forewings triangular, costa straight, apex round-pointed, termen rounded, slightly oblique; 10 separate, 7 connate or stalked; brown, in ♀ reddish-brown; a short oblique fuscous streak from one-third dorsum, in ♀ less marked and sometimes obsolete; a fuscous spot in middle of disc at three-fifths, absent in ♀; cilia fuscous-brown or brown. Hindwings with termen rounded; brown, paler towards termen; cilia brown.

Queensland: Emerald, Caloundra, Brisbane.

19. PARASA PYRRHOTHEIX, n. sp.

πυρρόθηξις, reddish-haired.

♂. 40 mm. Head, thorax, and abdomen reddish-brown. Palpi three-fourths; reddish-brown. Antennae reddish-brown; basal pectinations in ♂ long, ceasing abruptly at one-third. Legs brown; posterior tibiae with dense long hairs on dorsum; spurs concealed. Forewings triangular, costa slightly sinuate, apex round-pointed, termen rounded, slightly oblique; 10 separate; brown, becoming paler towards termen, sometimes greyish towards termen; cilia grey-brown. Hindwings with termen rounded; reddish-brown; cilia reddish-brown, apices paler.

North Queensland: Kuranda, near Cairns, in October and April; two specimens received from Mr. F. P. Dodd.

20. PARASA ACRATA, n. sp.

ἀκράτος, unmixed.

♂, ♀. 34 mm. Head, palpi, thorax, abdomen, and legs grey or ochreous-grey. Antennae ochreous; pectinations in ♂ long from base, gradually shortening beyond middle, but continued to apex, though there very short; in ♀ shortly bipectinate. Forewings triangular, costa straight to near apex, apex round-pointed, termen obliquely rounded; grey, sometimes purplish or ochreous-tinged; without markings; cilia concolorous. Hindwings with termen strongly rounded; pale grey or ochreous-grey-whitish; cilia concolorous.

South Australia: East-West Railway, it may have entered the train at Port Augusta; ♂ type received from Mr. W. B. Barnard. Northwest Australia: Roeburne; one ♀ in Coll. Lyell.

simple, the long pectinations ceasing abruptly. Abdomen reddish-brown. Legs brown. Forewings with costa straight to three-fourths, thence arched, apex rounded, termen nearly straight, slightly oblique; 7, 8, 9, 10 stalked; ochreous-grey, in ♀ pale-ochreous; in ♀ basal part of disc, except on dorsum, is suffused with fuscous-brown; a fine fuscous-brown subdorsal streak to middle; a transverse streak of similar colour from middle of cell to middorsum; a fuscous-brown spot on three-fifths costa prolonged as fine lines along posterior edge of cell and bases of veins proceeding from it; a similar fine subterminal line also giving off short branches on veins; cilia brown-whitish. Hindwings with termen strongly rounded; pale-brown; cilia pale-brown.

Northwest Australia: Sherlock River; four specimens in the British Museum.

18. PARASA ALPHAEA.

Bombyx alphaea Fab., *Syst. Ent.*, iii (1), p. 445.—*Eloasa calida* Wlk., *Cat. Brit. Mus.*, xxxii, p. 494.—*Doratifera congrua* Wlk., *Char. Undesc. Lep.*, p. 20.—*Lethocephala eremospila* Low., *Trans. Roy. Soc. S. Aust.*, 1902, p. 219.

♂. 28-35 mm. ♀. 32-45 mm. Head, thorax, and abdomen brown, in ♀ reddish-brown. Palpi 1; brown. Antennae pale brown; pectinations in ♂ moderately long from base to beyond middle, thence short to apex, in ♀ more shortly bipectinate to apex. Legs brown. Forewings triangular, costa straight, apex round-pointed, termen rounded, slightly oblique; 10 separate, 7 connate or stalked; brown, in ♀ reddish-brown; a short oblique fuscous streak from one-third dorsum, in ♀ less marked and sometimes obsolete; a fuscous spot in middle of disc at three-fifths, absent in ♀; cilia fuscous-brown or brown. Hindwings with termen rounded; brown, paler towards termen; cilia brown.

Queensland: Emerald, Caloundra, Brisbane.

19. PARASA PYRRHOTHEIX, n. sp.

πυρρόθηριξ, reddish-haired.

♂. 40 mm. Head, thorax, and abdomen reddish-brown. Palpi three-fourths; reddish-brown. Antennae reddish-brown; basal pectinations in ♂ long, ceasing abruptly at one-third. Legs brown; posterior tibiae with dense long hairs on dorsum; spurs concealed. Forewings triangular, costa slightly sinuate, apex round-pointed, termen rounded, slightly oblique; 10 separate; brown, becoming paler towards termen, sometimes greyish towards termen; cilia grey-brown. Hindwings with termen rounded; reddish-brown; cilia reddish-brown, apices paler.

North Queensland: Kuranda, near Cairns, in October and April; two specimens received from Mr. F. P. Dodd.

20. PARASA ACRATA, n. sp.

ἀκράτος, unmixed.

♂, ♀. 34 mm. Head, palpi, thorax, abdomen, and legs grey or ochreous-grey. Antennae ochreous; pectinations in ♂ long from base, gradually shortening beyond middle, but continued to apex, though there very short; in ♀ shortly bipectinate. Forewings triangular, costa straight to near apex, apex round-pointed, termen obliquely rounded; grey, sometimes purplish or ochreous-tinged; without markings; cilia concolorous. Hindwings with termen strongly rounded; pale grey or ochreous-grey-whitish; cilia concolorous.

South Australia: East-West Railway, it may have entered the train at Port Augusta; ♂ type received from Mr. W. B. Barnard. Northwest Australia: Roeburne; one ♀ in Coll. Lyell.

Gen. 5. ECNOMOCTENA nov.

ἐκνομοκτενος, with unusual comb.

Palpi moderate, porrect; second joint shortly rough-haired; terminal joint short or moderate, obtuse. Antennae of ♂ unipectinate, the outer row only being developed, pectinations long towards base, gradually shortening beyond middle, and disappearing at about three-fourths. Tibial spurs moderately long, but partly concealed in long hairs; posterior tibiae with middle spurs present. Forewings with forked median vein in cell, 7, 8, 9 stalked, 10 separate, sometimes approximated at base. Hindwings with single median vein in cell, 6 and 7 connate or stalked, 11 absent, 12 anastomosing shortly with cell near base.

Type, *E. brachyopa* Low. Allied to *Thosea* from which it differs in the peculiar antennae of the ♂. The ♀ is not yet known.

1. Forewing with fuscous postmedian and subterminal lines, the latter dentate
 *brachyopa*
 Forewing without such lines, but with a white line from dorsum half across
 disc *hemitoma*

21. ECNOMOCTENA BRACHYOPA.

Doratiphora brachyopa Low., Proc. Linn. Soc. N.S.W., 1897, p. 10.—*D. grisea* Auriv., *Archiv. f. Zool.*, xiii (2), 1920, p. 35, Pl. I, f. 4.

♂. 22-24 mm. Head ochreous-brown. Palpi dark-brown. Antennae brownish. Thorax reddish-brown. Abdomen ochreous-brown. Legs brownish-grey. Forewings short, broadly triangular, costa straight to near apex, apex rounded, termen rounded, scarcely oblique; reddish-brown, apical area grey, sometimes a whitish-grey fascia between postmedian and subterminal lines; lines fuscous; postmedian from two-thirds costa, at first transverse, bent abruptly inwards beneath cell, again bent and continued transversely, sometimes with a few dentations, to middorsum; preceding first line is an interrupted dark-brown ring on end of cell; subterminal fine and finely dentate, from before apex to tornus; an interrupted fuscous terminal line; cilia grey. Hindwings with termen rounded; 6 and 7 connate; pale-brownish; cilia grey.

An example of *grisea* kindly sent me by Prof. Aurivillius has the forewing wholly grey except annulus, but agrees in structure and pattern.

Northern Territory: Darwin. North Queensland: Cooktown, Cairns. Northwest Australia: Kimberley.

22. ECNOMOCTENA HEMITOMA, n. sp.

ἡμιτομος, half-divided.

♂. 26 mm. Head, palpi, antennae, thorax, abdomen, and legs reddish-brown. Forewings triangular, costa straight to near apex, apex rounded, termen somewhat obliquely rounded; reddish-brown; a broad, white, transverse line from mid-dorsum to middle of disc; cilia reddish-brown. Hindwings with termen rounded; 6 and 7 stalked; pale brownish; cilia brownish.

Northern Territory: Darwin in November; two specimens received from Mr. F. P. Dodd.

Gen. 6. THOSEA.

Wlk., *Cat. Brit. Mus.*, v, p. 1068; Hmps. *Moths Ind.*, i, p. 377.

Palpi moderate, porrect, thickened with appressed hairs; terminal joint short, concealed. Antennae of ♂ bipectinate to apex, with only gradual shortening in

Gen. 5. ECNOMOCTENA nov.

ἐκνομοκτενος, with unusual comb.

Palpi moderate, porrect; second joint shortly rough-haired; terminal joint short or moderate, obtuse. Antennae of ♂ unipectinate, the outer row only being developed, pectinations long towards base, gradually shortening beyond middle, and disappearing at about three-fourths. Tibial spurs moderately long, but partly concealed in long hairs; posterior tibiae with middle spurs present. Forewings with forked median vein in cell, 7, 8, 9 stalked, 10 separate, sometimes approximated at base. Hindwings with single median vein in cell, 6 and 7 connate or stalked, 11 absent, 12 anastomosing shortly with cell near base.

Type, *E. brachyopa* Low. Allied to *Thosea* from which it differs in the peculiar antennae of the ♂. The ♀ is not yet known.

1. Forewing with fuscous postmedian and subterminal lines, the latter dentate
 *brachyopa*
 Forewing without such lines, but with a white line from dorsum half across
 disc *hemitoma*

21. ECNOMOCTENA BRACHYOPA.

Doratiphora brachyopa Low., Proc. Linn. Soc. N.S.W., 1897, p. 10.—*D. grisea* Auriv., *Archiv. f. Zool.*, xiii (2), 1920, p. 35, Pl. I, f. 4.

♂. 22-24 mm. Head ochreous-brown. Palpi dark-brown. Antennae brownish. Thorax reddish-brown. Abdomen ochreous-brown. Legs brownish-grey. Forewings short, broadly triangular, costa straight to near apex, apex rounded, termen rounded, scarcely oblique; reddish-brown, apical area grey, sometimes a whitish-grey fascia between postmedian and subterminal lines; lines fuscous; postmedian from two-thirds costa, at first transverse, bent abruptly inwards beneath cell, again bent and continued transversely, sometimes with a few dentations, to middorsum; preceding first line is an interrupted dark-brown ring on end of cell; subterminal fine and finely dentate, from before apex to tornus; an interrupted fuscous terminal line; cilia grey. Hindwings with termen rounded; 6 and 7 connate; pale-brownish; cilia grey.

An example of *grisea* kindly sent me by Prof. Aurivillius has the forewing wholly grey except annulus, but agrees in structure and pattern.

Northern Territory: Darwin. North Queensland: Cooktown, Cairns. North-west Australia: Kimberley.

22. ECNOMOCTENA HEMITOMA, n. sp.

ἡμιτομος, half-divided.

♂. 26 mm. Head, palpi, antennae, thorax, abdomen, and legs reddish-brown. Forewings triangular, costa straight to near apex, apex rounded, termen somewhat obliquely rounded; reddish-brown; a broad, white, transverse line from mid-dorsum to middle of disc; cilia reddish-brown. Hindwings with termen rounded; 6 and 7 stalked; pale brownish; cilia brownish.

Northern Territory: Darwin in November; two specimens received from Mr. F. P. Dodd.

Gen. 6. THOSEA.

Wlk., *Cat. Brit. Mus.*, v, p. 1068; Hmps. *Moths Ind.*, i, p. 377.

Palpi moderate, porrect, thickened with appressed hairs; terminal joint short, concealed. Antennae of ♂ bipectinate to apex, with only gradual shortening in

terminal one-fourth. Tibial spurs long, not concealed; posterior tibiae with two pairs of spurs. Forewings with forked median vein in cell, 7, 8, 9 stalked or 7 connate or approximated. Hindwings with a single median vein in cell, costal edge of cell over four-fifths, 6 and 7 stalked, 11 absent, 12 anastomosing with cell near base.

Type, *T. unifascia* Wlk. from India. In *T. ordinata* 7 of forewings may be either approximated, connate, or stalked.

1. Forewings with an oblique dark line from mid-dorsum to costa before apex .. *penthima*
Forewings with a subterminal line of dark spots *ordinata*

23. THOSEA PENTHIMA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 206.—*Dasycomota pyrrhoea* Low., *ibid.*, p. 220.

Northern Territory: Darwin, Daly River. North Queensland: Claudie River, Cooktown, Cairns, Herberton, Townsville, Bowen.

24. THOSEA ORDINATA.

Doratifera ordinata Butl., *Trans. Ent. Soc.*, 1896, p. 388.—*Doratiphora colligans* Luc., *Proc. Roy. Soc. Qld.*, 1901, p. 76.

♂. 26-33 mm. Head pale ochreous, sometimes with a few fuscous scales on sides of face. Palpi $1\frac{1}{2}$; pale ochreous, sometimes brownish-tinged. Antennae pale ochreous; pectinations in ♂ moderately long at base, gradually diminishing to apex. Thorax, abdomen, and legs pale ochreous. Forewings triangular, costa straight or slightly sinuate, apex rounded, termen rounded, slightly oblique; pale ochreous, sometimes with some basal fuscous irroration; a slightly darker, obliquely transverse, median line, usually incomplete, sometimes followed by a second line; a subterminal series of closely approximated, squarish, dark brown spots; cilia pale ochreous. Hindwings with termen strongly rounded; pale ochreous; cilia pale ochreous.

Northern Territory: Alexandria. North Queensland: Townsville. Queensland: Clermont, Emerald, Brisbane, Toowoomba, Jandowae.

Gen. 7. CHALCOSCELIS.

Chalcoscelis Hmps., *Moths Ind.*, i, p. 392 (misprint of *Chalcoscelis*).

χαλκοσκελις, with brassy legs.

Palpi short, ascending, appressed to frons, covered with smoothly appressed hairs. Antennae in ♂ bipectinated towards base, pectinations long, apical half simple. Forewings with a single median vein in cell, 7, 8, 9 stalked, 10 connate from upper angle of cell. Hindwings with a single median vein in cell, costal edge of cell two-thirds to three-fourths, discocellulars with acute basal angle, 6 and 7 approximated at origin, connate, or short-stalked, 11 absent, 12 anastomosing with cell before middle.

1. Hindwings in ♂ fuscous, in ♀ ochreous *fumifera*
Hindwings in ♂ pale reddish-brown *castanica*

25. CHALCOSCELIS FUMIFERA.

Miresa fumifera Swin., *Trans. Ent. Soc.*, 1890, p. 195, Pl. 6, f. 13.—♀ *Doratiphora hemistaura* Low., *Trans. Roy. Soc. S. Aust.*, 1902, p. 215.—♂ *D. nephrochrysa* Low., *ibid.*, p. 218.

♂. 26-28 mm. Head fuscous-brown. Palpi $1\frac{1}{4}$; ochreous-brown; outer surface fuscous-brown. Antennae fuscous; with long pectinations at base, ceasing

terminal one-fourth. Tibial spurs long, not concealed; posterior tibiae with two pairs of spurs. Forewings with forked median vein in cell, 7, 8, 9 stalked or 7 connate or approximated. Hindwings with a single median vein in cell, costal edge of cell over four-fifths, 6 and 7 stalked, 11 absent, 12 anastomosing with cell near base.

Type, *T. unifascia* Wlk. from India. In *T. ordinata* 7 of forewings may be either approximated, connate, or stalked.

1. Forewings with an oblique dark line from mid-dorsum to costa before apex .. *penthima*
Forewings with a subterminal line of dark spots *ordinata*

23. THOSEA PENTHIMA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 206.—*Dasycomota pyrrhoea* Low., *ibid.*, p. 220.

Northern Territory: Darwin, Daly River. North Queensland: Claudie River, Cooktown, Cairns, Herberton, Townsville, Bowen.

24. THOSEA ORDINATA.

Doratifera ordinata Butl., *Trans. Ent. Soc.*, 1896, p. 388.—*Doratiphora colligans* Luc., *Proc. Roy. Soc. Qld.*, 1901, p. 76.

♂. 26-33 mm. Head pale ochreous, sometimes with a few fuscous scales on sides of face. Palpi 1½; pale ochreous, sometimes brownish-tinged. Antennae pale ochreous; pectinations in ♂ moderately long at base, gradually diminishing to apex. Thorax, abdomen, and legs pale ochreous. Forewings triangular, costa straight or slightly sinuate, apex rounded, termen rounded, slightly oblique; pale ochreous, sometimes with some basal fuscous irroration; a slightly darker, obliquely transverse, median line, usually incomplete, sometimes followed by a second line; a subterminal series of closely approximated, squarish, dark brown spots; cilia pale ochreous. Hindwings with termen strongly rounded; pale ochreous; cilia pale ochreous.

Northern Territory: Alexandria. North Queensland: Townsville. Queensland: Clermont, Emerald, Brisbane, Toowoomba, Jandowae.

Gen. 7. CHALCOSCELIS.

Chalcoscelis Hmps., *Moths Ind.*, i, p. 392 (misprint of *Chalcoscelis*).

χαλκοσκελις, with brassy legs.

Palpi short, ascending, appressed to frons, covered with smoothly appressed hairs. Antennae in ♂ bipectinated towards base, pectinations long, apical half simple. Forewings with a single median vein in cell, 7, 8, 9 stalked, 10 connate from upper angle of cell. Hindwings with a single median vein in cell, costal edge of cell two-thirds to three-fourths, discocellulars with acute basal angle, 6 and 7 approximated at origin, connate, or short-stalked, 11 absent, 12 anastomosing with cell before middle.

1. Hindwings in ♂ fuscous, in ♀ ochreous *fumifera*
Hindwings in ♂ pale reddish-brown *castanica*

25. CHALCOSCELIS FUMIFERA.

Miresa fumifera Swin., *Trans. Ent. Soc.*, 1890, p. 195, Pl. 6, f. 13.—♀ *Doratiphora hemistaura* Low., *Trans. Roy. Soc. S. Aust.*, 1902, p. 215.—♂ *D. nephrochrysa* Low., *ibid.*, p. 218.

♂. 26-28 mm. Head fuscous-brown. Palpi 1½; ochreous-brown; outer surface fuscous-brown. Antennae fuscous; with long pectinations at base, ceasing

abruptly about middle. Thorax and abdomen fuscous-brown. Legs fuscous-brown; coxae and femora ochreous. Forewings triangular, costa straight to near apex, apex round-pointed, termen slightly rounded, oblique; fuscous-brown, a rather large dark reddish-brown spot above dorsum before middle with a white dot on its anterior-superior edge; a fuscous discal dot beyond middle; cilia paler fuscous-brown. Hindwings with termen slightly rounded; fuscous; cilia fuscous, sometimes with indistinct whitish bars.

♀. 38 mm. Head brownish-ochreous. Palpi $1\frac{1}{2}$; brownish-ochreous. Antennae ochreous. Thorax brownish-ochreous, with some long fuscous-tipped scales anteriorly. Abdomen and legs brownish-ochreous. Forewings suboval, costa gently arched, apex rounded, termen obliquely rounded; pale brownish-ochreous; some fuscous suffusion near base; a trilobate reddish-brown blotch between dorsum and cell, its anterior edge white; a blackish discal dot about middle; a fine, irregularly crenulate, brown line, outwardly-curved, from three-fourths costa to termen below middle; a fine brown terminal line; cilia pale brownish with an interrupted darker median line. Hindwings with termen rounded; ochreous; cilia ochreous with an indistinct darker antemedian line.

North Queensland: Cairns, Mackay. Also from Borneo, Malay Peninsula, and India.

26. CHALCOSCELIS CASTANICA, n. sp.

κάστανικος, chestnut-brown.

♂. 26 mm. Head and palpi reddish-brown. Antennae reddish-brown; pectinations long toward base, abruptly disappearing about middle, thence simple. Thorax and abdomen reddish-brown. Legs densely hairy; reddish-brown. Forewings triangular, costa straight, apex pointed, termen very slightly rounded, oblique, dorsum shorter than termen; reddish-brown; an irregular spot of darker reddish-brown above one-third dorsum, containing a white dot at its anterior superior angle; a fuscous discal dot beyond middle at end of cell; cilia reddish-brown. Hindwings with termen slightly rounded; pale reddish-brown; cilia somewhat paler.

Type in Coll. Lyell.

North Queensland: Cape York (Elgner), one specimen in September.

Gen. 8. ANEPOPSIA, nov.

ἀνεπόψιος, inconspicuous.

Palpi long (2 or more), obliquely ascending, thickened with appressed hairs. Antennae in ♂ with long pectinations continued to apex with only gradual shortening in terminal one-fourth. Tibial spurs moderate; not concealed; posterior tibiae with terminal spurs only. Forewings with a single or forked median vein in cell, 7, 8, 9, stalked. Hindwings with a single or forked median vein in cell, costal edge of cell almost as long as dorsal, 6 and 7 connate or short-stalked, 11 absent, 12 anastomosing with cell near base, sometimes a series of short costal pseudoneuria.

Differs from *Parasa* in ♂ antennae being bipectinate to apex with only gradual reduction of length in terminal one-fourth, from *Thosea* in the absence of middle-spurs, and from both in the long ascending palpi. Type, *A. tephraea*.

- | | |
|---|-----------------|
| 1. Forewings without markings | <i>tephraea</i> |
| Forewings with dark postmedian line | <i>eugyra</i> |

abruptly about middle. Thorax and abdomen fuscous-brown. Legs fuscous-brown; coxae and femora ochreous. Forewings triangular, costa straight to near apex, apex round-pointed, termen slightly rounded, oblique; fuscous-brown, a rather large dark reddish-brown spot above dorsum before middle with a white dot on its anterior-superior edge; a fuscous discal dot beyond middle; cilia paler fuscous-brown. Hindwings with termen slightly rounded; fuscous; cilia fuscous, sometimes with indistinct whitish bars.

♀. 38 mm. Head brownish-ochreous. Palpi $1\frac{1}{2}$; brownish-ochreous. Antennae ochreous. Thorax brownish-ochreous, with some long fuscous-tipped scales anteriorly. Abdomen and legs brownish-ochreous. Forewings suboval, costa gently arched, apex rounded, termen obliquely rounded; pale brownish-ochreous; some fuscous suffusion near base; a trilobate reddish-brown blotch between dorsum and cell, its anterior edge white; a blackish discal dot about middle; a fine, irregularly crenulate, brown line, outwardly-curved, from three-fourths costa to termen below middle; a fine brown terminal line; cilia pale brownish with an interrupted darker median line. Hindwings with termen rounded; ochreous; cilia ochreous with an indistinct darker antemedian line.

North Queensland: Cairns, Mackay. Also from Borneo, Malay Peninsula, and India.

26. CHALCOSCELIS CASTANICA, n. sp.

κάστανικος, chestnut-brown.

♂. 26 mm. Head and palpi reddish-brown. Antennae reddish-brown; pectinations long toward base, abruptly disappearing about middle, thence simple. Thorax and abdomen reddish-brown. Legs densely hairy; reddish-brown. Forewings triangular, costa straight, apex pointed, termen very slightly rounded, oblique, dorsum shorter than termen; reddish-brown; an irregular spot of darker reddish-brown above one-third dorsum, containing a white dot at its anterior superior angle; a fuscous discal dot beyond middle at end of cell; cilia reddish-brown. Hindwings with termen slightly rounded; pale reddish-brown; cilia somewhat paler.

Type in Coll. Lyell.

North Queensland: Cape York (Elgner), one specimen in September.

Gen. 8. ANEPOPSIA, nov.

ἀνεπόψιος, inconspicuous.

Palpi long (2 or more), obliquely ascending, thickened with appressed hairs. Antennae in ♂ with long pectinations continued to apex with only gradual shortening in terminal one-fourth. Tibial spurs moderate; not concealed; posterior tibiae with terminal spurs only. Forewings with a single or forked median vein in cell, 7, 8, 9, stalked. Hindwings with a single or forked median vein in cell, costal edge of cell almost as long as dorsal, 6 and 7 connate or short-stalked, 11 absent, 12 anastomosing with cell near base, sometimes a series of short costal pseudoneuria.

Differs from *Parasa* in ♂ antennae being bipectinate to apex with only gradual reduction of length in terminal one-fourth, from *Thosea* in the absence of middle-spurs, and from both in the long ascending palpi. Type, *A. tephraea*.

1. Forewings without markings *tephraea*
 Forewings with dark postmedian line *eugyra*

27. ANEPOPSIA TEPHRAEA, n. sp.

τεφραιος, ash-coloured.

♂. 30 mm. Head, palpi, thorax, abdomen, and legs grey. Antennae grey; pectinations in ♂ ochreous-tinged, long, becoming shorter in apical one-fourth. Forewings triangular, costa straight, apex tolerably pointed, termen bowed, oblique; grey; cilia grey. Hindwings with termen rounded; grey; cilia grey.

Queensland: Charleville in December; one specimen.

28. ANEPOPSIA EUGYRA, n. sp.

εὐγυρος, well-rounded.

♂. 22 mm. Head, palpi, thorax, abdomen, and legs pale-grey. Antennae pale-grey; pectinations in ♂ long, becoming gradually shorter in apical one-third. Forewings broadly triangular, costa straight to near apex, apex rounded, termen obliquely rounded; pale-grey; a slightly curved darker line from three-fifths dorsum nearly to apex; cilia pale-grey. Hindwings with termen rounded; grey; cilia grey.

Type in Coll. Goldfinch.

North Queensland: Meringa, near Cairns in November; one specimen.

Gen. 9. HYPOBLECHRA, nov.

ὑποβληχρός, rather feeble.

Palpi moderately long, ascending; thickened with appressed hairs; terminal joint short. Antennae in ♂ bipectinate towards base, pectinations long, towards apex simple. Tibial spurs moderate, not concealed; posterior tibiae without middle spurs. Forewings with a single median vein in cell, 7 separate, 8, 9, 10 stalked. Hindwings with a single median vein in cell, costal edge of cell four-fifths or more, 6 and 7 connate or stalked, 11 absent, 12 anastomosing with cell near base.

Type, *H. delocrossa* Turn. A development of *Birthama* differing in the loss of middle-spurs. Both the species are of small size.

1. Forewings with a pale line parallel with and close to termen *delocrossa*
Forewings without pale line close to termen *haploptis*

29. HYPOBLECHRA DELOCROSSA.

Birthama delocrossa Turn., *Trans. Roy. Soc. S. Aust.*, 1906, p. 139.

North Queensland: Cairns.

30. HYPOBLECHRA HAPLOPTIS.

Birthama haploptis Turn., *Trans. Roy. Soc. S. Aust.*, 1906, p. 139.

North Queensland: Cairns.

Gen. 10. BIRTHAMA.

Birthama Wlk., *Journ. Linn. Soc.*, vi, 1862, p. 175; Hmps., *Moths India*, i, p. 386.

Palpi short or moderate, porrect or obliquely ascending, thickened with appressed hairs; terminal joint short, concealed. Antennae in ♂ bipectinate towards base, pectinations long, towards apex simple. Tibial spurs moderate, not concealed; posterior tibiae with two pairs of spurs. Forewings with a single median vein in cell, 7 separate, 8, 9, 10 stalked. Hindwings with a single median vein in cell, costal edge of cell four-fifths or more, 6 and 7 connate or stalked, 11 absent, 12 anastomosing with cell near base or before middle.

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τεφραιος, ash-coloured.

♂. 30 mm. Head, palpi, thorax, abdomen, and legs grey. Antennae grey; pectinations in ♂ ochreous-tinged, long, becoming shorter in apical one-fourth. Forewings triangular, costa straight, apex tolerably pointed, termen bowed, oblique; grey; cilia grey. Hindwings with termen rounded; grey; cilia grey.

Queensland: Charleville in December; one specimen.

28. ANEPOPSIA EUGYRA, n. sp.

εὐγυρος, well-rounded.

♂. 22 mm. Head, palpi, thorax, abdomen, and legs pale-grey. Antennae pale-grey; pectinations in ♂ long, becoming gradually shorter in apical one-third. Forewings broadly triangular, costa straight to near apex, apex rounded, termen obliquely rounded; pale-grey; a slightly curved darker line from three-fifths dorsum nearly to apex; cilia pale-grey. Hindwings with termen rounded; grey; cilia grey.

Type in Coll. Goldfinch.

North Queensland: Meringa, near Cairns in November; one specimen.

Gen. 9. HYPOBLECHRA, nov.

ὑποβληχρός, rather feeble.

Palpi moderately long, ascending; thickened with appressed hairs; terminal joint short. Antennae in ♂ bipectinate towards base, pectinations long, towards apex simple. Tibial spurs moderate, not concealed; posterior tibiae without middle spurs. Forewings with a single median vein in cell, 7 separate, 8, 9, 10 stalked. Hindwings with a single median vein in cell, costal edge of cell four-fifths or more, 6 and 7 connate or stalked, 11 absent, 12 anastomosing with cell near base.

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Birthama haploptis Turn., *Trans. Roy. Soc. S. Aust.*, 1906, p. 139.

North Queensland: Cairns.

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Type, *B. obliqua* Wlk., from Borneo. According to Hampson the ♂ has only one pair of spurs on the posterior tibiae, the ♀ two pairs; but I suspect an error of observation. In the Australian species the spurs are equally developed in both sexes.

- | | |
|---|--------------------|
| 1. Forewings without whitish markings | <i>plagiocscia</i> |
| Forewings with white discal dot or whitish lines | 2 |
| 2. Forewings with white discal dot or oblique whitish line | <i>modesta</i> |
| Forewings with transverse whitish lines from costa and dorsum halfway across disc | <i>ocularis</i> |

31. BIRTHAMA PLAGIOSCIA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 190.—*Doratiphora aspidophora* Low., *ibid.*, p. 281.

Queensland: Brisbane, Stradbroke Island.

32. BIRTHAMA MODESTA.

♂. *Pygmaecomorpha modesta* B-Bak., *Novitates Zoolog.*, 1904, p. 387, Pl. 5, f. 35 (September).—♂ *Birthama leucosticta* Turn., *Trans. Roy. Soc. S. Aust.*, 1904, p. 241. ♀ *B. dochmographa* Turn., *ibid.*, p. 241.

Mr. Bethune-Baker's name has a few months' priority. The sexes are strikingly dissimilar.

Northern Territory: Darwin. North Queensland: Thursday Island, Claudie River, Cairns, Innisfail. Also from New Guinea.

33. BIRTHAMA OCULARIS.

Bombyx ocularis Luc., *Trans. Nat. Hist. Soc. Qld.*, 1894, p. 104.—*Doratiphora eumela* Low., *Trans. Roy. Soc. S. Aust.*, 1896, p. 153.—*Birthama discotypa* Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 190.

Northern Territory: Darwin. North Queensland: Cairns, Mackay. Queensland: Brisbane.

Gen. 11. ANAPAEA.

Wlk., *Cat. Brit. Mus.*, v, p. 1117.

Palpi very short, porrect, hairy. Antennae of ♂ bipectinate towards base, pectinations long, apical one-half simple. Tibial spurs short, concealed; posterior tibiae without middle spurs. Forewings with a single median vein in cell, 7, 8, 9 stalked, 10 separate or connate. Hindwings with a single median vein in cell, costal edge of cell but little shorter than dorsal, 6 and 7 widely separate at origin, 11 absent, 12 anastomosing with cell near base, a series of many fine pseudoneuria running from 12 towards costa.

Type, *A. denotata* Wlk.

34. ANAPAEA DENOTATA.

Wlk., *Cat. Brit. Mus.*, xxxii, 1865, p. 474.

♂. 20-28 mm. ♀. 28-34 mm. Head reddish-brown; face pale-ochreous. Palpi 2; pale-ochreous. Antennae reddish-brown; in ♂ with long pectinations at base, ceasing abruptly about middle. Thorax reddish-brown, sometimes partly grey-whitish. Abdomen reddish-brown. Legs reddish-brown or pale-ochreous. Forewings triangular, costa straight to near apex, or slightly arched in ♀, apex rounded, termen obliquely rounded; reddish-brown, sometimes ochreous-grey; sometimes one or two slender transverse sub-basal lines partially developed; three darker

Type, *B. obliqua* Wlk., from Borneo. According to Hampson the ♂ has only one pair of spurs on the posterior tibiae, the ♀ two pairs; but I suspect an error of observation. In the Australian species the spurs are equally developed in both sexes.

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|---|--------------------|
| 1. Forewings without whitish markings | <i>plagiocscia</i> |
| Forewings with white discal dot or whitish lines | 2 |
| 2. Forewings with white discal dot or oblique whitish line | <i>modesta</i> |
| Forewings with transverse whitish lines from costa and dorsum halfway across disc | <i>ocularis</i> |

31. BIRTHAMA PLAGIOSCIA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 190.—*Doratiphora aspidophora* Low., *ibid.*, p. 281.

Queensland: Brisbane, Stradbroke Island.

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♂. *Pygmaecomorpha modesta* B-Bak., *Novitates Zoolog.*, 1904, p. 387, Pl. 5, f. 35 (September).—♂ *Birthama leucosticta* Turn., *Trans. Roy. Soc. S. Aust.*, 1904, p. 241. ♀ *B. dochmographa* Turn., *ibid.*, p. 241.

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Type, *A. denotata* Wlk.

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spots arranged in an oblique line between one-fourth dorsum and cell, more or less edged with whitish; usually several similar dots beneath midcosta; two postmedian and a subterminal transverse line paler or whitish; a whitish suffused line around apex; cilia reddish-brown, sometimes indistinctly barred, apices paler. Hindwings with termen strongly rounded; in ♂ dark-brown, in ♀ brownish-ochreous; cilia ochreous, apices in ♂ sometimes whitish.

Northern Territory: Darwin. North Queensland: Cairns, Atherton, Townsville. Queensland: Brisbane, Coolangatta, Toowoomba, Dalby. New South Wales: Sydney, Jervis Bay. Victoria: Melbourne, Sea Lake. Western Australia: Perth. Examples from Brisbane and northwards are smaller and darker, those from Sydney and southwards larger and paler.

Gen. 12. SCOPELODES.

Westw., *Nat. Libr.*, 37 (Ent. vii), 1841, p. 222.

Antennae in ♂ bipectinate, pectinations long towards base, shortening about middle, and gradually disappearing leaving terminal one-fourth simple. Palpi very long, porrect or ascending; second joint long, thickened with appressed hairs; terminal joint very long, ending in a strong terminal tuft of long hairs dilated at apex. Legs including tarsi densely rough-haired; tibial spurs long but concealed; posterior tibiae without middle spurs. Forewings with a single median vein in cell, 7, 8, 9, 10 stalked or 10 separate, 11 from near end of cell. Hindwings with a single median vein in cell, costal edge of cell about four-fifths, 6 and 7 connate or stalked, 11 present but very short, 12 approximated to cell before middle but not anastomosing, a series of costal pseudoneuria.

Type, *S. unicolor* Westw. from India.

35. SCOPELODES NITENS.

B-Bak., *Novitates Zoolog.*, 1904, p. 385, Pl. 5, f. 51.

♂. 38-40 mm. Head whitish. Palpi ochreous-grey; terminal tuft whitish, extreme apex fuscous. Antennae pale-ochreous. Thorax whitish, posteriorly ochreous-tinged. Abdomen ochreous. Legs very hairy; pale-grey. Forewings triangular, termen straight to near apex, apex rounded, termen obliquely rounded; shining ochreous-grey with some transverse corrugations; cilia ochreous-grey. Hindwings with termen strongly rounded; ochreous; cilia ochreous.

North Queensland: Banks Island in Torres Strait (W. McLennan) in January, two specimens taken at light, received from the Australian Museum. Also from New Guinea.

Gen. 13. ANAXIDEA.

Swin., *Cat. Oxf. Mus.*, i, 1892, p. 231.

Palpi short or moderate, porrect, thickened with appressed hairs or loosely hairy; terminal joint short, concealed. Antennae of ♂ bipectinate towards base, towards apex simple. Tibial spurs short, sometimes concealed; posterior tibiae with terminal spurs only. Forewings with a single median vein in cell, 7, 8, 9 stalked, 10 separate, connate, or stalked. Hindwings with a single median vein in cell, dorsal edge of cell four-fifths or more, 6 and 7 stalked, 11 present, from about middle of cell, running into 12, which is separate, a costal series of fine pseudoneuria.

Type, *A. lactea* Swin. It is probable that further study of the extra-Australian species will discover an older name for this genus.

spots arranged in an oblique line between one-fourth dorsum and cell, more or less edged with whitish; usually several similar dots beneath midcosta; two post-medial and a subterminal transverse line paler or whitish; a whitish suffused line around apex; cilia reddish-brown, sometimes indistinctly barred, apices paler. Hindwings with termen strongly rounded; in ♂ dark-brown, in ♀ brownish-ochreous; cilia ochreous, apices in ♂ sometimes whitish.

Northern Territory: Darwin. North Queensland: Cairns, Atherton, Townsville. Queensland: Brisbane, Coolangatta, Toowoomba, Dalby. New South Wales: Sydney, Jervis Bay. Victoria: Melbourne, Sea Lake. Western Australia: Perth. Examples from Brisbane and northwards are smaller and darker, those from Sydney and southwards larger and paler.

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Antennae in ♂ bipectinate, pectinations long towards base, shortening about middle, and gradually disappearing leaving terminal one-fourth simple. Palpi very long, porrect or ascending; second joint long, thickened with appressed hairs; terminal joint very long, ending in a strong terminal tuft of long hairs dilated at apex. Legs including tarsi densely rough-haired; tibial spurs long but concealed; posterior tibiae without middle spurs. Forewings with a single median vein in cell, 7, 8, 9, 10 stalked or 10 separate, 11 from near end of cell. Hindwings with a single median vein in cell, costal edge of cell about four-fifths, 6 and 7 connate or stalked, 11 present but very short, 12 approximated to cell before middle but not anastomosing, a series of costal pseudoneuria.

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North Queensland: Banks Island in Torres Strait (W. McLennan) in January, two specimens taken at light, received from the Australian Museum. Also from New Guinea.

Gen. 13. ANAXIDEA.

Swin., *Cat. Oxf. Mus.*, i, 1892, p. 231.

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Type, *A. lactea* Swin. It is probable that further study of the extra-Australian species will discover an older name for this genus.

1. Forewings with oblique line	2
Forewings without oblique line	<i>integer</i>
2. Forewings with finely dentate oblique line	3
Forewings with oblique line not dentate	<i>loxogramma</i>
3. Wings whitish or grey-whitish	<i>lactea</i>
Wings brown	<i>dochmosema</i>

36. ANAXIDEA LACTEA.

Swin., *Cat. Oxf. Mus.*, i, 1892, p. 231.—*Susica aerogramma* Low., *Proc. Linn. Soc. N.S.W.*, 1915, p. 477.

♂. 32-34 mm. ♀. 33-42 mm. Head, thorax, and abdomen whitish or grey-whitish; sides of face fuscous. Palpi less than 1, loose-haired; fuscous, apices ochreous. Antennae ochreous; pectinations in ♂ moderate, shortening gradually beyond middle and ceasing before apex. Legs whitish or grey-whitish; tarsi ochreous barred with fuscous. Forewings triangular, costa straight, apex round-pointed, termen slightly rounded, oblique; 10 separate or connate; whitish or grey-whitish; costal edge sometimes ochreous-tinged; a dark fuscous, finely dentate, oblique line from dorsum before middle to three-fourths costa, obsolete or slightly angled beneath costa; cilia concolorous. Hindwings with termen rounded; colour as forewings.

South Australia: Purnong, Pinnaroo, Ooldea. Western Australia: Albany, Perth, Mullewa.

37. ANAXIDEA DOCHMOSEMA.

Susica dochmosema Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 191.
Queensland: Rockhampton.

38. ANAXIDEA LOXOGRAMMA.

Parasa loxogramma Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 193 and 1906, p. 138.

♂. 28-33 mm. ♀. 36-38 mm. Head, thorax, and abdomen brown, ochreous-brown, or grey. Palpi 1½; brown or grey; thickened with appressed hairs. Antennae pale-brown; in ♂ with moderate pectinations gradually shortening beyond middle, apices simple. Legs brown or grey. Forewings triangular, costa straight in ♂, nearly so in ♀; apex pointed, termen rounded, slightly oblique; 10 connate or stalked; brown, ochreous-brown, greyish-brown, or grey; a nearly straight oblique dark line from dorsum near base to apex, sometimes pale-edged posteriorly, sometimes a pale line only; a dark median discal dot immediately beyond this line; a similar inwardly-curved line from apex to termen shortly above tornus; cilia brown or grey, apices paler. Hindwings with termen rounded; brown, ochreous-brown, greyish-brown, or grey; cilia concolorous.

Variable in colour but easily recognized.

North Queensland: Herberton, Atherton. Queensland: Brisbane, Mt. Tambourine, National Park (3,000 ft.), Toowoomba. New South Wales: Lismore, Dorrigo, Barrington Tops, Sydney.

39. ANAXIDEA INTEGER, n. sp.

integer, without markings.

♀. 38 mm. Head, palpi, and thorax pinkish-white. Antennae ochreous-whitish; in ♀ shortly bipectinate, becoming simple towards apex. Abdomen and legs pinkish-white. Forewings triangular, costa nearly straight, very slightly sinuate, apex rounded, termen rounded, oblique; 6 connate, 10 separate; pinkish-

1. Forewings with oblique line	2
Forewings without oblique line	<i>integer</i>
2. Forewings with finely dentate oblique line	3
Forewings with oblique line not dentate	<i>loxogramma</i>
3. Wings whitish or grey-whitish	<i>lactea</i>
Wings brown	<i>dochmosema</i>

36. ANAXIDEA LACTEA.

Swin., *Cat. Oxf. Mus.*, i, 1892, p. 231.—*Susica aerogramma* Low., *Proc. Linn. Soc. N.S.W.*, 1915, p. 477.

♂. 32-34 mm. ♀. 33-42 mm. Head, thorax, and abdomen whitish or grey-whitish; sides of face fuscous. Palpi less than 1, loose-haired; fuscous, apices ochreous. Antennae ochreous; pectinations in ♂ moderate, shortening gradually beyond middle and ceasing before apex. Legs whitish or grey-whitish; tarsi ochreous barred with fuscous. Forewings triangular, costa straight, apex rounded-pointed, termen slightly rounded, oblique; 10 separate or connate; whitish or grey-whitish; costal edge sometimes ochreous-tinged; a dark fuscous, finely dentate, oblique line from dorsum before middle to three-fourths costa, obsolete or slightly angled beneath costa; cilia concolorous. Hindwings with termen rounded; colour as forewings.

South Australia: Purnong, Pinnaroo, Ooldea. Western Australia: Albany, Perth, Mullewa.

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Susica dochmosema Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 191.
Queensland: Rockhampton.

38. ANAXIDEA LOXOGRAMMA.

Parasa loxogramma Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 193 and 1906, p. 138.

♂. 28-33 mm. ♀. 36-38 mm. Head, thorax, and abdomen brown, ochreous-brown, or grey. Palpi 1½; brown or grey; thickened with appressed hairs. Antennae pale-brown; in ♂ with moderate pectinations gradually shortening beyond middle, apices simple. Legs brown or grey. Forewings triangular, costa straight in ♂, nearly so in ♀; apex pointed, termen rounded, slightly oblique; 10 connate or stalked; brown, ochreous-brown, greyish-brown, or grey; a nearly straight oblique dark line from dorsum near base to apex, sometimes pale-edged posteriorly, sometimes a pale line only; a dark median discal dot immediately beyond this line; a similar inwardly-curved line from apex to termen shortly above tornus; cilia brown or grey, apices paler. Hindwings with termen rounded; brown, ochreous-brown, greyish-brown, or grey; cilia concolorous.

Variable in colour but easily recognized.

North Queensland: Herberton, Atherton. Queensland: Brisbane, Mt. Tambourine, National Park (3,000 ft.), Toowoomba. New South Wales: Lismore, Dorrigo, Barrington Tops, Sydney.

39. ANAXIDEA INTEGER, n. sp.

integer, without markings.

♀. 38 mm. Head, palpi, and thorax pinkish-white. Antennae ochreous-whitish; in ♀ shortly bipectinate, becoming simple towards apex. Abdomen and legs pinkish-white. Forewings triangular, costa nearly straight, very slightly sinuate, apex rounded, termen rounded, oblique; 6 connate, 10 separate; pinkish-

white without markings; cilia ochreous-whitish, apices pale pinkish-fuscous. Hindwings with termen rounded; whitish; cilia whitish.

Type in South Australian Museum.

Northwest Australia: Hammersley Range (W. D. Dodd).

Gen. 14. HEDRAEA, NOV.

ἕδραιος, sedentary.

Palpi very long (about 4), porrect, loose-haired; terminal joint long. Tibial spurs long, not concealed; posterior tibiae with middle spurs. Forewings with forked median vein in cell, 7 connate or stalked with 8, 9, 10 separate. Hindwings with single median vein in cell, costal edge of cell almost as long as dorsal, 6 and 7 connate or approximated at origin, 11 present but short, 12 approximated to cell before middle but not anastomosing, a series of costal pseudoneuria.

40. HEDRAEA QUADRIDENS.

Doratiphora quadridens Luc., *Proc. Roy. Soc. Qld.*, 1901, p. 77.

♀. 42 mm. Head, thorax, abdomen, and legs whitish-ochreous. Palpi long (4), porrect, ochreous-whitish. Antennae ochreous-whitish. Forewings triangular, costa gently arched, apex rounded-rectangular, termen nearly straight, slightly oblique; very pale ochreous; a transverse series of 4 or 5 white spots in disc at two-thirds, surrounded by a brown suffusion; costal edge brown; cilia pale-ochreous. Hindwings with termen rounded; colour as forewings. Underside whitish-ochreous; forewings with discal spots indicated; hindwings with a brown discal dot before middle.

Queensland: Brisbane, Stradbroke Island.

Gen. 15. ELASSOPTILA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 206.

Palpi very long (over 6), porrect; second joint very long, thickened with appressed hairs; terminal joint long. Antennae of ♂ with a double row of long pectinations continued almost to apex (apical one-tenth simple); of ♀ simple. Thorax and abdomen slender. Legs smooth; tibial spurs very long; posterior tibiae with two pairs of spurs. Forewings with median vein obsolete, 7, 8, 9 stalked. Hindwings with median vein obsolete, costal edge of cell not much shorter than dorsal, 6 and 7 stalked, 11 present from middle of cell running into 12 which is separate.

Type, *E. microxutha* Turn. Remarkable in this family for its slender build, small size, with which the obsolescence of the median veins is correlated, smooth legs, long palpi, and long tibial spurs. It is, however, a true Limacodid and the neuriation of the hindwings is primitive.

41. ELASSOPTILA MICROXUTHA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 206.

Queensland: Mt. Tambourine, National Park (3,000 ft.). New South Wales: Lismore.

Gen. 16. HYPSELOLOPHA, NOV.

ὑψηλολοφος, with high crest.

Palpi moderately long, ascending, thickened with appressed hairs; terminal joint short. Antennae of ♂ bipectinate towards base, towards apex simple. Thorax with a large postmedian and a smaller posterior crest. Tibial spurs moderately

white without markings; cilia ochreous-whitish, apices pale pinkish-fuscous. Hindwings with termen rounded; whitish; cilia whitish.

Type in South Australian Museum.

Northwest Australia: Hammersley Range (W. D. Dodd).

Gen. 14. HEDRAEA, NOV.

ἑδραῖος, sedentary.

Palpi very long (about 4), porrect, loose-haired; terminal joint long. Tibial spurs long, not concealed; posterior tibiae with middle spurs. Forewings with forked median vein in cell, 7 connate or stalked with 8, 9, 10 separate. Hindwings with single median vein in cell, costal edge of cell almost as long as dorsal, 6 and 7 connate or approximated at origin, 11 present but short, 12 approximated to cell before middle but not anastomosing, a series of costal pseudoneuria.

40. HEDRAEA QUADRIDENS.

Doratiphora quadridens Luc., *Proc. Roy. Soc. Qld.*, 1901, p. 77.

♀. 42 mm. Head, thorax, abdomen, and legs whitish-ochreous. Palpi long (4), porrect, ochreous-whitish. Antennae ochreous-whitish. Forewings triangular, costa gently arched, apex rounded-rectangular, termen nearly straight, slightly oblique; very pale ochreous; a transverse series of 4 or 5 white spots in disc at two-thirds, surrounded by a brown suffusion; costal edge brown; cilia pale-ochreous. Hindwings with termen rounded; colour as forewings. Underside whitish-ochreous; forewings with discal spots indicated; hindwings with a brown discal dot before middle.

Queensland: Brisbane, Stradbroke Island.

Gen. 15. ELASSOPTILA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 206.

Palpi very long (over 6), porrect; second joint very long, thickened with appressed hairs; terminal joint long. Antennae of ♂ with a double row of long pectinations continued almost to apex (apical one-tenth simple); of ♀ simple. Thorax and abdomen slender. Legs smooth; tibial spurs very long; posterior tibiae with two pairs of spurs. Forewings with median vein obsolete, 7, 8, 9 stalked. Hindwings with median vein obsolete, costal edge of cell not much shorter than dorsal, 6 and 7 stalked, 11 present from middle of cell running into 12 which is separate.

Type, *E. microxutha* Turn. Remarkable in this family for its slender build, small size, with which the obsolescence of the median veins is correlated, smooth legs, long palpi, and long tibial spurs. It is, however, a true Limacodid and the neuriation of the hindwings is primitive.

41. ELASSOPTILA MICROXUTHA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 206.

Queensland: Mt. Tambourine, National Park (3,000 ft.). New South Wales: Lismore.

Gen. 16. HYPSELOLOPHA, NOV.

ὑψηλολοφος, with high crest.

Palpi moderately long, ascending, thickened with appressed hairs; terminal joint short. Antennae of ♂ bipectinate towards base, towards apex simple. Thorax with a large postmedian and a smaller posterior crest. Tibial spurs moderately

long, not concealed; posterior tibiae with two pairs of spurs. Forewings with a single median vein in cell, 7, 8, 9 stalked, 10 connate or short-stalked. Hindwings with a single median vein in cell, cell short (about one-third), 6 and 7 stalked, 11 present but short, 12 rather closely approximated to cell towards base.

42. HYPSELOLOPHA HYPODROSA, n. sp.

ὑποδρωσος, somewhat dewy.

♂. 28 mm. Head white. Palpi 1½; brown. Antennae brown; pectinations in ♂ moderately long, ceasing rather abruptly at two-thirds. Thorax whitish partly suffused with brown; posterior crest brown. Abdomen brown. Legs whitish-brown. Forewings triangular, costa slightly arched, apex round-pointed, termen nearly straight, slightly oblique; brown; base and middle of disc broadly suffused with whitish; an irregular, obliquely crescentic, dark-brown, discal mark beyond middle; a line of whitish suffusion, interrupted by veins, along termen; cilia pale-brown. Hindwings with termen rounded; ochreous-whitish becoming brown towards termen; cilia ochreous, apices whitish.

A species of unusual structure and *facies*.

North Queensland: Evelyn Scrub, near Herberton, in February; one specimen received from Mr. F. P. Dodd.

Gen. 17. SUSICA.

Wlk., *Cat. Brit. Mus.*, v, p. 1113.

Palpi moderate, porrect, or somewhat ascending, clothed with appressed or rather loose hairs; terminal joint short. Antennae of ♂ bipectinate towards base, pectinations long, usually shortening abruptly about middle, terminal part of antennae usually simple, but sometimes pectinations extend to apex, shortening gradually; in ♀ simple. Forewings with forked median vein in cell, 7 connate or stalked, 10 separate, connate, or stalked. Hindwings with 11 from near base running into 12, costal pseudoneuria sometimes present.

Type, *S. pallida* Wlk., from India.

1. Forewings marked or tinged with red	2
Forewings not marked or tinged with red	5
2. Forewings with many distinct red lines	3
Forewings more or less suffused with red	4
3. Forewings without defined transverse lines	<i>resplendens</i>
Forewings with two fuscous transverse lines	<i>miltogramma</i>
4. Forewings with oblique fuscous line	<i>cosmocalla</i>
Forewings without oblique line	<i>miltocosma</i>
5. Wings white	<i>collaris</i>
Wings not white	6
6. Forewings with oblique line or lines	7
Forewings without oblique lines	9
7. Forewings with two pale oblique lines	<i>euryparoa</i>
Forewings with one oblique line	8
8. Wings pale-ochreous	<i>kenricki</i>
Wings grey-whitish	<i>placerodes</i>
9. Forewings with a dark-fuscous subterminal line	<i>fasciata</i>
Forewings without subterminal line	10
10. Forewings with base of costa white	<i>humeralis</i>
Forewings with base of costa not white	11
11. Wings pale-ochreous	12
Wings chestnut-brown	<i>uniformis</i>
12. Forewings narrow	<i>liosarca</i>
Forewings broad	<i>monomorpha</i>

long, not concealed; posterior tibiae with two pairs of spurs. Forewings with a single median vein in cell, 7, 8, 9 stalked, 10 connate or short-stalked. Hindwings with a single median vein in cell, cell short (about one-third), 6 and 7 stalked, 11 present but short, 12 rather closely approximated to cell towards base.

42. HYPSELOLOPHA HYPODROSA, n. sp.

ὑποδρωσος, somewhat dewy.

♂. 28 mm. Head white. Palpi 1½; brown. Antennae brown; pectinations in ♂ moderately long, ceasing rather abruptly at two-thirds. Thorax whitish partly suffused with brown; posterior crest brown. Abdomen brown. Legs whitish-brown. Forewings triangular, costa slightly arched, apex round-pointed, termen nearly straight, slightly oblique; brown; base and middle of disc broadly suffused with whitish; an irregular, obliquely crescentic, dark-brown, discal mark beyond middle; a line of whitish suffusion, interrupted by veins, along termen; cilia pale-brown. Hindwings with termen rounded; ochreous-whitish becoming brown towards termen; cilia ochreous, apices whitish.

A species of unusual structure and *facies*.

North Queensland: Evelyn Scrub, near Herberton, in February; one specimen received from Mr. F. P. Dodd.

Gen. 17. SUSICA.

Wlk., *Cat. Brit. Mus.*, v, p. 1113.

Palpi moderate, porrect, or somewhat ascending, clothed with appressed or rather loose hairs; terminal joint short. Antennae of ♂ bipectinate towards base, pectinations long, usually shortening abruptly about middle, terminal part of antennae usually simple, but sometimes pectinations extend to apex, shortening gradually; in ♀ simple. Forewings with forked median vein in cell, 7 connate or stalked, 10 separate, connate, or stalked. Hindwings with 11 from near base running into 12, costal pseudoneuria sometimes present.

Type, *S. pallida* Wlk., from India.

1. Forewings marked or tinged with red	2
Forewings not marked or tinged with red	5
2. Forewings with many distinct red lines	3
Forewings more or less suffused with red	4
3. Forewings without defined transverse lines	<i>resplendens</i>
Forewings with two fuscous transverse lines	<i>miltogramma</i>
4. Forewings with oblique fuscous line	<i>cosmocalla</i>
Forewings without oblique line	<i>miltocosma</i>
5. Wings white	<i>collaris</i>
Wings not white	6
6. Forewings with oblique line or lines	7
Forewings without oblique lines	9
7. Forewings with two pale oblique lines	<i>euryparoa</i>
Forewings with one oblique line	8
8. Wings pale-ochreous	<i>kenricki</i>
Wings grey-whitish	<i>placerodes</i>
9. Forewings with a dark-fuscous subterminal line	<i>fasciata</i>
Forewings without subterminal line	10
10. Forewings with base of costa white	<i>humeralis</i>
Forewings with base of costa not white	11
11. Wings pale-ochreous	12
Wings chestnut-brown	<i>uniformis</i>
12. Forewings narrow	<i>liosarca</i>
Forewings broad	<i>monomorpha</i>

43. *SUSICA RESPLENDENS*, n. sp.

resplendens, brilliant.

♂. 32-34 mm. Head bright-red. Palpi 1½; ochreous, upper surface red. Antennae pale-ochreous; pectinations in ♂ very long towards base, ceasing abruptly about middle. Thorax grey; outer edge and two longitudinal lines bright-red. Abdomen grey-whitish. Legs red; ventral surface whitish; posterior pair mostly whitish. Forewings elongate-triangular, costa straight to near apex, apex rounded, termen nearly straight, rounded beneath, scarcely oblique; 7, 8, 9 stalked, 10 connate or stalked; grey with broad longitudinal bright-red streaks; a fine costal streak partly or wholly confluent with a broad subcostal streak from base to apex; from subcostal near base arises a median streak extending as far as middle, dilated posteriorly; a fine streak between the two preceding; a streak from base along fold to tornus, dilated before middle to dorsal edge, then interrupted; a series of short interneural streaks beyond cell; a bright-red terminal line; a slight dark fuscous irroration on mid-dorsum, sometimes forming an obscure oblique line in disc; cilia whitish-grey. Hindwings with termen rounded; pale red; cilia whitish-grey. Underside except cilia red.

Allied to *S. miltogramma*, differing in the longer palpi, red head, absence of ochreous tinge in wings and their cilia, almost complete absence of dark fuscous lines, and the whitish abdomen.

Northern Territory: Darwin (Batchelor) in October; two specimens received from Mr. G. F. Hill.

44. *SUSICA MILTOGRAMMA*.

Momopola miltogramma Meyr., *Trans. Roy. Soc. S. Aust.*, 1891, p. 190.—*Darala rosea* Luc., *Proc. Linn. Soc. N.S.W.*, 1891, p. 291.—*Hildala miniacea* Swin., *Cat. Oxf. Mus.* i, 1892, p. 232.

Mr. N. B. Tindale informs me that Meyrick's name has a few weeks' priority. Forewings with 7, 8, 9 stalked, 10 connate or stalked.

Northern Territory: Darwin, Port Essington. North Queensland: Cooktown, Cairns, Mareeba.

45. *SUSICA COSMOCALLA*.

Momopola cosmocalla Low., *Trans. Roy. Soc. S. Aust.*, 1902, p. 220.

♂, ♀. 35-40 mm. Head rosy. Palpi rosy, apex usually fuscous. Antennae whitish-ochreous; pectinations in ♂ 4, apical two-fifths serrate. Thorax rosy mixed with whitish-grey. Abdomen grey-whitish. Legs whitish; dorsum of femora, tibiae, and anterior coxae more or less rosy; tibiae and tarsi annulated with blackish. Forewings triangular, costa strongly arched, apex rounded, termen obliquely rounded; 7, 8, 9 stalked, 10 connate or stalked; rosy suffused, except on margins, with grey-whitish; an oblique dark-fuscous line from mid-dorsum nearly to four-fifths costa; cilia grey-whitish, apices rosy. Hindwings with termen strongly rounded; whitish; in ♀ rosy-tinged towards termen; cilia grey-whitish, apices whitish.

When describing *S. miltocosma* from a ♀ type I thought that this species, which I had seen, might be its ♂, but I have now both sexes of both species. Mr. Lower appears also to have included both species in his description.

North Queensland: Claudie River. Queensland: Rockhampton, Duaranga, Gayndah.

43. *SUSICA RESPLENDENS*, n. sp.

resplendens, brilliant.

♂. 32-34 mm. Head bright-red. Palpi 1½; ochreous, upper surface red. Antennae pale-ochreous; pectinations in ♂ very long towards base, ceasing abruptly about middle. Thorax grey; outer edge and two longitudinal lines bright-red. Abdomen grey-whitish. Legs red; ventral surface whitish; posterior pair mostly whitish. Forewings elongate-triangular, costa straight to near apex, apex rounded, termen nearly straight, rounded beneath, scarcely oblique; 7, 8, 9 stalked, 10 connate or stalked; grey with broad longitudinal bright-red streaks; a fine costal streak partly or wholly confluent with a broad subcostal streak from base to apex; from subcostal near base arises a median streak extending as far as middle, dilated posteriorly; a fine streak between the two preceding; a streak from base along fold to tornus, dilated before middle to dorsal edge, then interrupted; a series of short interneural streaks beyond cell; a bright-red terminal line; a slight dark fuscous irroration on mid-dorsum, sometimes forming an obscure oblique line in disc; cilia whitish-grey. Hindwings with termen rounded; pale red; cilia whitish-grey. Underside except cilia red.

Allied to *S. miltogramma*, differing in the longer palpi, red head, absence of ochreous tinge in wings and their cilia, almost complete absence of dark fuscous lines, and the whitish abdomen.

Northern Territory: Darwin (Batchelor) in October; two specimens received from Mr. G. F. Hill.

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Mr. N. B. Tindale informs me that Meyrick's name has a few weeks' priority. Forewings with 7, 8, 9 stalked, 10 connate or stalked.

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♂, ♀. 35-40 mm. Head rosy. Palpi rosy, apex usually fuscous. Antennae whitish-ochreous; pectinations in ♂ 4, apical two-fifths serrate. Thorax rosy mixed with whitish-grey. Abdomen grey-whitish. Legs whitish; dorsum of femora, tibiae, and anterior coxae more or less rosy; tibiae and tarsi annulated with blackish. Forewings triangular, costa strongly arched, apex rounded, termen obliquely rounded; 7, 8, 9 stalked, 10 connate or stalked; rosy suffused, except on margins, with grey-whitish; an oblique dark-fuscous line from mid-dorsum nearly to four-fifths costa; cilia grey-whitish, apices rosy. Hindwings with termen strongly rounded; whitish; in ♀ rosy-tinged towards termen; cilia grey-whitish, apices whitish.

When describing *S. miltocosma* from a ♀ type I thought that this species, which I had seen, might be its ♂, but I have now both sexes of both species. Mr. Lower appears also to have included both species in his description.

North Queensland: Claudie River. Queensland: Rockhampton, Duaranga, Gayndah.

46. *SUSICA MILTOCOSMA*.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 191.

♂. 35 mm. ♀. 40 mm. Head grey; face red in ♂, with red margins in ♀. Palpi 1½; red. Antennae pale-grey; pectinations in ♂ rather long, ceasing abruptly at about three-fifths. Thorax reddish-grey. Abdomen white. Legs whitish; dorsum of anterior pair red with tarsi barred with black. Forewings elongate-triangular, costa nearly straight in ♂, gently arched in ♀, apex rounded-rectangular, termen slightly rounded, slightly oblique; 7, 8, 9 stalked, 10 connate or stalked; reddish-grey; a red costal streak, broad in ♂, slender in ♀; terminal edge sometimes reddish-tinged; cilia grey. Hindwings with termen rounded; white; cilia white. Underside white; forewings suffused with red along costa and termen.

The sexes are similar.

North Queensland: Townsville, Mackay. Queensland: Westwood.

47. *SUSICA COLLARIS*.

Comana collaris Wlk., *Cat. Brit. Mus.*, xxxii, p. 496.

♂. 36-45 mm. ♀. 50-65 mm. Head white; lower edge of face reddish-brown. Palpi 1; reddish-brown. Antennae pale-brown; pectinations in ♂ rather long, shortening rapidly beyond middle, apical two-fifths simple. Thorax white; collar reddish-brown, anterior edge sometimes fuscous. Abdomen white. Legs reddish-brown; tibiae and tarsi with blackish bars. Forewings elongate-triangular, costa in ♂ straight, in ♀ slightly arched, apex round-pointed, termen slightly rounded, oblique; 7, 8, 9 stalked, 10 connate or stalked; white; cilia white. Hindwings with termen rounded; white; cilia white.

Perfectly fresh specimens are faintly tinged with green, but this soon fades away.

Northern Territory: Mary River. North Queensland: Cairns, Atherton, Herberton, Townsville. Queensland: Clermont, Westwood, Eidsvold, Gayndah, Brisbane, Charleville. Northwest Australia: Hammersley Range.

48. *SUSICA FASCIATA*.

Teara fasciata Wlk., *Cat. Brit. Mus.*, iv, p. 851.—*Mecytha semicana* Wlk., *ibid.*, v, p. 1121.—*Apoda xylomeli* Scott, *Aust. Lep.*, p. 19, Pl. vi.

♂. 32-38 mm. ♀. 39-46 mm. Head brown, sometimes mixed with white. Palpi about 1; dark-brown. Antennae brown; pectinations in ♂ moderate, gradually shortening from middle, not reaching apex. Thorax brown, sometimes mixed or even largely replaced by white. Abdomen fuscous; tuft white. Legs brown more or less mixed with white; tibiae and tarsi barred with fuscous. Forewings elongate-triangular; costa straight, apex rounded, termen slightly rounded, scarcely oblique; 7, 8, 9 stalked, 10 separate; fuscous-brown; apical area usually more or less suffused with white, in ♂ the whole of terminal and dorsal areas may be white; a darker dentate line from two-thirds costa, at first transverse, bent inwards beneath middle, and again bent to end on mid-dorsum, sometimes partly obsolete; a similar but less dentate subterminal line from costa, curved outwards beneath costa, then inwards, and again outwards, ending at tornus; cilia brown more or less mixed with white. Hindwings with termen rounded; fuscous-brown; a white terminal line from costa not reaching tornus; cilia white, sometimes with dark spots or bars. Underside of both wings fuscous with white terminal lines.

46. *SUSICA MILTOCOSMA*.

Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 191.

♂. 35 mm. ♀. 40 mm. Head grey; face red in ♂, with red margins in ♀. Palpi 1½; red. Antennae pale-grey; pectinations in ♂ rather long, ceasing abruptly at about three-fifths. Thorax reddish-grey. Abdomen white. Legs whitish; dorsum of anterior pair red with tarsi barred with black. Forewings elongate-triangular, costa nearly straight in ♂, gently arched in ♀, apex rounded-rectangular, termen slightly rounded, slightly oblique; 7, 8, 9 stalked, 10 connate or stalked; reddish-grey; a red costal streak, broad in ♂, slender in ♀; terminal edge sometimes reddish-tinged; cilia grey. Hindwings with termen rounded; white; cilia white. Underside white; forewings suffused with red along costa and termen.

The sexes are similar.

North Queensland: Townsville, Mackay. Queensland: Westwood.

47. *SUSICA COLLARIS*.

Comana collaris Wlk., *Cat. Brit. Mus.*, xxxii, p. 496.

♂. 36-45 mm. ♀. 50-65 mm. Head white; lower edge of face reddish-brown. Palpi 1; reddish-brown. Antennae pale-brown; pectinations in ♂ rather long, shortening rapidly beyond middle, apical two-fifths simple. Thorax white; collar reddish-brown, anterior edge sometimes fuscous. Abdomen white. Legs reddish-brown; tibiae and tarsi with blackish bars. Forewings elongate-triangular, costa in ♂ straight, in ♀ slightly arched, apex round-pointed, termen slightly rounded, oblique; 7, 8, 9 stalked, 10 connate or stalked; white; cilia white. Hindwings with termen rounded; white; cilia white.

Perfectly fresh specimens are faintly tinged with green, but this soon fades away.

Northern Territory: Mary River. North Queensland: Cairns, Atherton, Herberton, Townsville. Queensland: Clermont, Westwood, Eidsvold, Gayndah, Brisbane, Charleville. Northwest Australia: Hammersley Range.

48. *SUSICA FASCIATA*.

Teara fasciata Wlk., *Cat. Brit. Mus.*, iv, p. 851.—*Mecytha semicana* Wlk., *ibid.*, v, p. 1121.—*Apoda xylomeli* Scott, *Aust. Lep.*, p. 19, Pl. vi.

♂. 32-38 mm. ♀. 39-46 mm. Head brown, sometimes mixed with white. Palpi about 1; dark-brown. Antennae brown; pectinations in ♂ moderate, gradually shortening from middle, not reaching apex. Thorax brown, sometimes mixed or even largely replaced by white. Abdomen fuscous; tuft white. Legs brown more or less mixed with white; tibiae and tarsi barred with fuscous. Forewings elongate-triangular; costa straight, apex rounded, termen slightly rounded, scarcely oblique; 7, 8, 9 stalked, 10 separate; fuscous-brown; apical area usually more or less suffused with white, in ♂ the whole of terminal and dorsal areas may be white; a darker dentate line from two-thirds costa, at first transverse, bent inwards beneath middle, and again bent to end on mid-dorsum, sometimes partly obsolete; a similar but less dentate subterminal line from costa, curved outwards beneath costa, then inwards, and again outwards, ending at tornus; cilia brown more or less mixed with white. Hindwings with termen rounded; fuscous-brown; a white terminal line from costa not reaching tornus; cilia white, sometimes with dark spots or bars. Underside of both wings fuscous with white terminal lines.

Very variable in the amount of white on upper surface of forewings and thorax.

Northern Territory: Darwin, Stapleton. North Queensland: Herberton, Townsville. Queensland: Caloundra, Brisbane, National Park (3,000 ft.). New South Wales: Lismore, Newcastle, Sydney, Jervis Bay.

49. *SUSICA HUMERALIS*.

Miresa humeralis Wlk., *Cat. Brit. Mus.*, xxxii, p. 477.—*M. albibasis* Wlk., *Trans. Ent. Soc.*, 1862, p. 274.

♂. 41-45 mm. ♀. 50-52 mm. Head and thorax reddish-ochreous-brown. Palpi 1, porrect; reddish-ochreous-brown. Antennae brown; pectinations in ♂ moderately long, becoming short about middle, and ceasing at three-fourths. Abdomen ochreous-brown. Legs ochreous-brown; tibiae and tarsi usually more or less mixed with fuscous. Forewings suboval, costal slightly arched, apex rounded, termen obliquely rounded; 7, 8, 9 stalked, 10 usually connate sometimes stalked; ochreous-brown with a few scattered whitish scales; a white spot on base of costa, usually prolonged along costal edge for a short distance; cilia ochreous-brown. Hindwings with termen rounded; as forewings, but rather paler.

Two males from the Northern Territory have the whitish irroration on forewings more pronounced than usual and forming a terminal series of whitish spots; while the white basal dot is not produced along costa. This is, I think, only a local race.

The species has been identified with *Bombyx corones* Fab. (*Syst. Ent.* iii (1), p. 463), but it is only necessary to quote the following sentence of his description to show that it refers to a very different insect: "Alae anticae cinereae margine exteriore sanguineo, posticae niveae striga postica fusca".

Northern Territory: Darwin, King River. North Queensland: Cairns, Cardwell. Queensland: Duaringa, Westwood, Clermont, Emerald, Eidsvold, Brisbane, Toowoomba.

50. *SUSICA LIOSARCA*.

Doratiphora liosarca Low., *Trans. Roy. Soc. S. Aust.*, 1902, p. 217.

♂, ♀. 26-30 mm. Head, thorax, and abdomen ochreous-brown. Palpi 1½, loose-haired; ochreous-brown. Antennae with a tuft of hairs on lower surface of first joint; ochreous-brown; in ♂ with moderately long pectinations continued to apex; in ♀ simple. Legs brown. Forewings semi-oval, costa nearly straight, apex round-pointed, termen slightly rounded, oblique; 7 connate or stalked, 10 separate; ochreous-brown or orange-brown; usually a few fuscous scales which are arranged in a curved line beneath and beyond disc, and sometimes form also a subdorsal and a subapical dot; cilia brown. Hindwings with termen rounded; like forewings, but paler.

Northern Territory: Darwin. North Queensland: Thursday Island, Claudie River. Northwest Australia: Derby.

51. *SUSICA MONOMORPHA*.

Natada monomorpha Turn., *Trans. Roy. Soc. S. Aust.*, 1904, p. 242.

North Queensland: Townsville.

52. *SUSICA PLACERODES*, n. sp.

πλάκερωδης, broad.

Very variable in the amount of white on upper surface of forewings and thorax.

Northern Territory: Darwin, Stapleton. North Queensland: Herberton, Townsville. Queensland: Caloundra, Brisbane, National Park (3,000 ft.). New South Wales: Lismore, Newcastle, Sydney, Jervis Bay.

49. *SUSICA HUMERALIS*.

Miresa humeralis Wlk., *Cat. Brit. Mus.*, xxxii, p. 477.—*M. albibasis* Wlk., *Trans. Ent. Soc.*, 1862, p. 274.

♂. 41-45 mm. ♀. 50-52 mm. Head and thorax reddish-ochreous-brown. Palpi 1, porrect; reddish-ochreous-brown. Antennae brown; pectinations in ♂ moderately long, becoming short about middle, and ceasing at three-fourths. Abdomen ochreous-brown. Legs ochreous-brown; tibiae and tarsi usually more or less mixed with fuscous. Forewings suboval, costal slightly arched, apex rounded, termen obliquely rounded; 7, 8, 9 stalked, 10 usually connate sometimes stalked; ochreous-brown with a few scattered whitish scales; a white spot on base of costa, usually prolonged along costal edge for a short distance; cilia ochreous-brown. Hindwings with termen rounded; as forewings, but rather paler.

Two males from the Northern Territory have the whitish irroration on forewings more pronounced than usual and forming a terminal series of whitish spots; while the white basal dot is not produced along costa. This is, I think, only a local race.

The species has been identified with *Bombyx corones* Fab. (*Syst. Ent.* iii (1), p. 463), but it is only necessary to quote the following sentence of his description to show that it refers to a very different insect: "Alae anticae cinereae margine exteriore sanguineo, posticae niveae striga postica fusca".

Northern Territory: Darwin, King River. North Queensland: Cairns, Cardwell. Queensland: Duaringa, Westwood, Clermont, Emerald, Eidsvold, Brisbane, Toowoomba.

50. *SUSICA LIOSARCA*.

Doratiphora liosarca Low., *Trans. Roy. Soc. S. Aust.*, 1902, p. 217.

♂, ♀. 26-30 mm. Head, thorax, and abdomen ochreous-brown. Palpi 1½, loose-haired; ochreous-brown. Antennae with a tuft of hairs on lower surface of first joint; ochreous-brown; in ♂ with moderately long pectinations continued to apex; in ♀ simple. Legs brown. Forewings semi-oval, costa nearly straight, apex round-pointed, termen slightly rounded, oblique; 7 connate or stalked, 10 separate; ochreous-brown or orange-brown; usually a few fuscous scales which are arranged in a curved line beneath and beyond disc, and sometimes form also a subdorsal and a subapical dot; cilia brown. Hindwings with termen rounded; like forewings, but paler.

Northern Territory: Darwin. North Queensland: Thursday Island, Claudie River. Northwest Australia: Derby.

51. *SUSICA MONOMORPHA*.

Natada monomorpha Turn., *Trans. Roy. Soc. S. Aust.*, 1904, p. 242.

North Queensland: Townsville.

52. *SUSICA PLACERODES*, n. sp.

πλάκερωδης, broad.

♂. 48 mm. ♀. 60 mm. Head, thorax, and abdomen grey-brown. Palpi $1\frac{1}{2}$; curved upwards, smooth-haired; grey-brown. Antennae grey-brown; in ♂ with moderately long pectinations from base, shortening about middle, passing into serrations towards apex, in ♀ simple towards base, serrate towards apex. Legs grey-brown; anterior tibiae and first three tarsal joints with white dorsal apical dots. Forewings triangular, costa gently arched, apex rounded, termen obliquely rounded; 7 connate or stalked, 10 connate or separate; grey-whitish with sparsely scattered dark fuscous scales; base in ♂ suffused with grey-brown, a dark grey-brown oblique line from one-third dorsum to two-thirds costa in ♂ passing through a whitish area, in ♀ edged posteriorly with whitish; apical area in ♂ suffused with grey-brown, in ♀ with grey-whitish with a sharp straight anterior edge; cilia grey. Hindwings with termen rounded; pale grey; cilia grey.

North Queensland: Kuranda, near Cairns, in March and April; two specimens received from Mr. F. P. Dodd.

53. *SUSICA EURYPAROA*, n. sp.

εὐρυπάρωος, broadly reddish-brown.

♀. 36 mm. Head and palpi ochreous mixed with reddish-brown. Antennae brown; basal joint with a whitish tuft of scales beneath. Thorax reddish-brown. Abdomen brown. Legs brown; anterior femora, tibiae, and first three tarsal joints with white apical anterior bar. Forewings oval-triangular, costa nearly straight, apex and termen very obtusely rounded; brown; two pale whitish-brown lines; first straight, from one-fourth dorsum almost reaching midcosta; second from beneath five-sixths costa to termen above tornus, slightly outwardly curved; some paler suffusion posterior to first line; cilia brown. Hindwings with termen rounded; pale-brown; cilia pale-brown.

Type in Coll. Lyell.

North Queensland: Cape York (Elgner), one specimen in November.

54. *SUSICA KENRICKI*.

Lasiolimacos kenricki B-Bak., *Novitates Zoolog.*, 1904, p. 388, Pl. vi, f. 33.

♂, ♀. 38-45 mm. Head brown. Palpi ascending, $1\frac{1}{2}$; brown. Antennae ochreous-brown; in ♂ with long basal pectinations, shortening abruptly in middle, thence very short and replaced by serrations towards apex. Thorax pale ochreous-brown. Abdomen pale ochreous. Legs ochreous-brown; posterior tibiae and tarsi with fuscous bars. Forewings broadly triangular, costa nearly straight, apex rounded, termen rounded, scarcely oblique; 7, 8, 9 stalked, 10 connate; pale ochreous sparsely irrorated with brown; a fuscous discal dot beyond middle; a fine oblique brown line from two-fifths dorsum to apex; a similar line from apex to termen slightly above tornus; cilia pale ochreous, apices brown. Hindwings with termen rounded; pale ochreous; cilia as forewings.

North Queensland: Cape York, Cairns. Also from New Guinea.

55. *SUSICA UNIFORMIS*.

Hildala uniformis Swin., *Cat. Oxf. Mus.*, i, p. 232.

♂. 25 mm. Head, palpi, thorax, and abdomen chestnut-brown. Antennae brown; pectinations in ♂ 4, gradually shortening to apex. Legs chestnut-brown. Forewings short and broad, costa gently arched, apex rounded-rectangular, termen slightly bowed, not oblique; uniform chestnut-brown; cilia concolorous. Hindwings with termen strongly rounded; colour as in forewings but paler; cilia concolorous.

♂. 48 mm. ♀. 60 mm. Head, thorax, and abdomen grey-brown. Palpi $1\frac{1}{2}$; curved upwards, smooth-haired; grey-brown. Antennae grey-brown; in ♂ with moderately long pectinations from base, shortening about middle, passing into serrations towards apex, in ♀ simple towards base, serrate towards apex. Legs grey-brown; anterior tibiae and first three tarsal joints with white dorsal apical dots. Forewings triangular, costa gently arched, apex rounded, termen obliquely rounded; 7 connate or stalked, 10 connate or separate; grey-whitish with sparsely scattered dark fuscous scales; base in ♂ suffused with grey-brown, a dark grey-brown oblique line from one-third dorsum to two-thirds costa in ♂ passing through a whitish area, in ♀ edged posteriorly with whitish; apical area in ♂ suffused with grey-brown, in ♀ with grey-whitish with a sharp straight anterior edge; cilia grey. Hindwings with termen rounded; pale grey; cilia grey.

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North Australia: Port Essington. One specimen, the type, in the Oxford Museum.

Unrecognized Species.

56. *Apoda infrequens* Scott., *Aust. Lepid.*, p. 20, Pl. vi.
 57. *Doratiphora perizera* Low., *Trans. Roy. Soc. S. Aust.*, 1902, p. 216.
 58. *Susica mjöbergi* Auriv., *Arkiv. f. Zool.*, xiii (2), 1920, p. 37.

Index to Limacodidae.

GENERA.

Anapaea, 11; Anaxidea, 13; Anepopsia, 8; Apodecta, 3; Birthama, 10; Chalcoscelis, 7; Doratifera, 2; Ecnomoctena, 5; Elassoptila, 15; Hedraea, 14; Hypoblechra, 9; Hypselolopha, 16; Lamprolepida, 1; Parasa, 4; Scopelodes, 12; Susica, 17; Thosea, 6.

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(Synonyms and unrecognized species in italics.)

acrata, 20; *actinias*, 11; *aerogramma*, 36; *albibasis*, 49; *alphaea*, 18; *amphibrota*, 13; *aspidophora*, 31; *atmodes*, 12; *bombycoides*, 13; *brachyopa*, 21; *calida*, 18; *callidesma*, 14; *casta*, 8; *castanica*, 26; *chrysochroa*, 1; *circumdata*, 2; *collaris*, 47; *colligans*, 24; *confusa*, 2; *congrua*, 18; *corallina*, 9; *corones*, 49; *cosmocalla*, 45; *delocrossa*, 29; *denotata*, 34; *discotypa*, 33; *dochmographa*, 32; *dochmosema*, 37; *entima*, 15; *erecta*, 13; *eremospila*, 18; *euchrysa*, 1; *eugyra*, 28; *eumela*, 33; *euryparoa*, 53; *fasciata*, 48; *fumifera*, 25; *grisea*, 21; *haplopis*, 30; *hemistaura*, 25; *hemitoma*, 22; *humeralis*, 49; *hypodrosa*, 42; *infrequens*, 56; *integer*, 39; *kenricki*, 54; *lactea*, 36; *leucosticta*, 32; *lewini*, 7; *liosarca*, 50; *loxogramma*, 38; *loxoleuca*, 12; *luxa*, 13; *microxutha*, 41; *miltocosma*, 46; *miltogramma*, 44; *miniacea*, 44; *mjöbergi*, 58; *modesta*, 32; *monodisca*, 11; *monomorpha*, 51; *nephrochrysa*, 25; *neurocausta*, 17; *nitens*, 35; *ochroptila*, 4; *ocularis*, 33; *olorina*, 5; *ordinata*, 24; *oxlei*, 2; *paroa*, 16; *penthima*, 23; *perizera*, 57; *pinguis*, 6; *placerodes*, 52; *plagioclia*, 31; *pyrrhoea*, 23; *pyrrhothrix*, 19; *quadridens*, 40; *quadriguttata*, 7; *resplendens*, 43; *rosea*, 44; *semicana*, 48; *sphenosema*, 13; *stenora*, 10; *tephraea*, 27; *unicolor*, 10; *uniformis*, 55; *vulnerans*, 3; *xyloveli*, 48.

Fam. Zygaenidae.

Tongue present (absent in a few exotic genera). Palpi moderate or short. Tibial spurs short or absent; middle spurs always absent. Forewings sometimes with all veins arising separately from cell, areole always absent, often a median vein in cell, sometimes forked, vein 1 developed throughout. Hindwings with 1 present, usually a median vein in cell, 11 from middle of cell, or from beyond middle, running into 12, or 11 absent, being replaced by an anastomosis.

This family agrees with the Limacodidae in the absence of the areole together with the frequent presence of the median vein; it differs in the well-developed tongue (though to this there are exceptions), and in the origin of the first radial of the hindwings from the middle, or beyond the middle of the cell; when this vein disappears it is replaced by an anastomosis in the same position. The resemblance between the neuration of the two families is deceptive, being due to convergence. In many genera of Zygaenidae all the veins of the forewings arise separately from the cell as in the Hesperidae, some Pyraloidea and Pterophoroidea, and many Tineoidea. It can scarcely be doubted that in all these instances the apparently simple neuration has arisen by obsolescence of the chorda leaving an areocel. We may confidently expect that an examination of the pupal tracheation in the Zygaenidae will confirm this. In the Limacodidae we have reason to believe the areole has disappeared by a wholly different process, that of coalescence.

There have been few additions to the small number of Australian species since Meyrick's revision published in 1886; and they fail to give an adequate impression of the family, which is of moderate size, and notable for its variety of structure and appearance. Probably it represents an ancient group which was once much

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larger, and has been to a great extent superseded by more modern developments. It is now rather isolated, though more nearly related to the Tineoidea than to any other superfamily, and appears sufficiently distinct to constitute the superfamily Zygaenoidea.

Key to Genera.

- | | |
|--|---------------------|
| 1. Hindwings small, less than $\frac{1}{2}$ length of forewings | <i>Thyrassia</i> |
| Hindwings moderate or rather large, two-thirds or more in length | 2 |
| 2. Forewings with 7 and 8 stalked | 3 |
| Forewings with 7 and 8 not stalked | 4 |
| 3. Hindwings with 4 and 6 absent | <i>Homophylotis</i> |
| Hindwings with all veins present | <i>Onceropypa</i> |
| 4. Hindwings with 6 absent | <i>Hestiochora</i> |
| Hindwings with 6 present | 5 |
| 5. Hindwings with 4 absent | <i>Pollanisis</i> |
| Hindwings with 4 present | <i>Neoprocris</i> |

Gen. 1. THYRASSIA Butl.

Journ. Linn. Soc., Zool., 1876, p. 355.

Tongue present. Palpi very short, porrect, slender, smooth, apex pointed. Antennae bipectinate to apex in both sexes. Tibiae without spurs; anterior tibiae with a moderate strigil. Forewings with 2 from two-thirds, 3 from angle, 9 and 10 connate or stalked, 8 approximated, connate, or short-stalked with 9, 10, or 8 and 9 short-stalked and 10 connate, 11 from shortly before upper angle. Hindwings small, less than half length of forewings; cell two-thirds, all veins present and separate, 6 widely separated from 7, costal edge of cell weakly developed or obsolete, 11 represented by a transverse bar between 12 and end of cell.

Type, *T. subcordata* Wlk. from India. There is much variation in veins 8, 9, 10 of forewings. The genus mimics the Syntomidae.

1. THYRASSIA INCONCINNA.

Thyrassia inconcinna Swin., *Cat. Oxf. Mus.*, i, 1892, p. 55.—*Monoschalis mimetica* Turn., *Trans. Roy. Soc. S. Aust.*, 1902, p. 200.

North Queensland: Lizard Island, Cairns, Townsville.

Gen. 2. HOMOPHYLOTIS Turn.

Turn., *Trans. Roy. Soc. S. Aust.*, 1904, p. 243.

Frons smooth, rounded, projecting. Tongue present. Palpi long (about 2), smooth, cylindrical, pointed, porrect. Antennae in ♂ bipectinate, pectinations very long, but not reaching to apex, which is simple; in ♀ simple. Posterior tibiae without middle spurs; terminal spurs moderate; anterior tibiae with strigil as long as tibia. Forewings with 2 from near angle, 7 and 8 stalked, 7 to termen, 11 from two-thirds. Hindwings with 4 absent (coincident with 3), 5 approximated at origin to or connate with 3, 6 absent, 11 from middle of cell connecting it with 12.

The neuration of the hindwings is hard to make out, and wing-folds are easily mistaken for veins, but that given is, I think, correct. Type, *H. thyridota* Turn. Besides this Jordan (*Seitz. Faun. Indo-austral.*, p. 46) enumerates eight other species from the Archipelago and India.

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Turn., *Trans. Roy. Soc. S. Aust.*, 1904, p. 243.

North Queensland: Cooktown, Cairns. According to Jordan also from Batchian in the Moluccas.

Gen. 3. ONCEROPYGA TURN.

Trans. Roy. Soc. S. Aust., 1906, p. 136.

Frons smooth, rounded, projecting. Tongue present. Palpi moderately long, very slender, smooth, acute, porrect. Antennae of both sexes bipectinate to apex, pectinations in ♂ very long, in ♀ moderate. Posterior tibiae without middle-spurs, terminal spurs moderate, anterior tibiae without strigil. Abdomen of ♀ with terminal segment much swollen and very shortly rough-haired. Forewings with 2 from seven-eighths, 7 and 8 stalked, 7 to termen, 11 from two-thirds. Hindwings with all veins present, 3 and 4 connate or stalked, 6 and 7 separate, parallel, costal edge of cell weakly developed, 11 from middle of cell running into 12.

Only the single species is at present known.

3. ONCEROPYGA ANELIA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1906, p. 137.

The sexes are similar except in antennae and abdomen.

Queensland: Westwood, Mt. Tambourine, Toowoomba. New South Wales: Bulli.

Gen. 4. HESTIOCHORA MEYR.

PROC. LINN. SOC. N.S.W., 1886, p. 788.

Frons smooth, not projecting. Tongue present. Palpi short, porrected or drooping, pointed, hairy beneath. Antennae in ♂ bipectinate, but simple towards apex; in ♀ simple or serrate. Posterior tibiae without middle-spurs; terminal spurs short; anterior tibiae without strigil. Abdomen of ♀ with terminal segment much swollen and very shortly rough-haired. Forewings with all veins present and separate, 2 from seven-eighths, 11 from three-fourths. Hindwings with 2 from two-thirds, 4 and 5 separate, connate or stalked, 6 absent, 11 absent, 12 anastomosing with cell.

Type, *H. tricolor* Wlk.

- | | |
|--|--------------------|
| 1. Collar red or orange | 2 |
| Collar black | <i>ruftventris</i> |
| 2. Forewings with reddish or orange markings | 2 |
| Forewings without such markings | <i>tricolor</i> |
| 3. Forewings with subapical orange or reddish spot | <i>erythrota</i> |
| Forewings without subapical spot | <i>xanthocoma</i> |

4. HESTIOCHORA XANTHOCOMA.

Meyr., PROC. LINN. SOC. N.S.W., 1886, p. 788.

North Australia: Darwin. Queensland: Westwood, Duaringa.

5. HESTIOCHORA ERYTHROTA.

Meyr., PROC. LINN. SOC. N.S.W., 1886, p. 789.

Queensland: Brisbane. New South Wales: Dorrigo, Sydney, Goulburn.

6. HESTIOCHORA TRICOLOR.

Procris tricolor Wlk., *Cat. Brit. Mus.*, i, p. 111.—*Hestiochora tricolor* Meyr., PROC. LINN. SOC. N.S.W., 1886, p. 789.

Queensland: Brisbane, Miles. New South Wales: Sydney, Bulli, Jervis Bay. Victoria: Melbourne, Wandin, Fernshaw, Healesville, Gisborne. Tasmania: Launceston, Deloraine, Hobart, Triabunna. South Australia: Mt. Lofty. Western Australia: Perth, Mt. Dale.

Gen. 3. ONCEROPYGA TURN.

Trans. Roy. Soc. S. Aust., 1906, p. 136.

Frons smooth, rounded, projecting. Tongue present. Palpi moderately long, very slender, smooth, acute, porrect. Antennae of both sexes bipectinate to apex, pectinations in ♂ very long, in ♀ moderate. Posterior tibiae without middle-spurs, terminal spurs moderate, anterior tibiae without strigil. Abdomen of ♀ with terminal segment much swollen and very shortly rough-haired. Forewings with 2 from seven-eighths, 7 and 8 stalked, 7 to termen, 11 from two-thirds. Hindwings with all veins present, 3 and 4 connate or stalked, 6 and 7 separate, parallel, costal edge of cell weakly developed, 11 from middle of cell running into 12.

Only the single species is at present known.

3. ONCEROPYGA ANELIA.

Turn., *Trans. Roy. Soc. S. Aust.*, 1906, p. 137.

The sexes are similar except in antennae and abdomen.

Queensland: Westwood, Mt. Tambourine, Toowoomba. New South Wales: Bulli.

Gen. 4. HESTIOCHORA MEYR.

PROC. LINN. SOC. N.S.W., 1886, p. 788.

Frons smooth, not projecting. Tongue present. Palpi short, porrected or drooping, pointed, hairy beneath. Antennae in ♂ bipectinate, but simple towards apex; in ♀ simple or serrate. Posterior tibiae without middle-spurs; terminal spurs short; anterior tibiae without strigil. Abdomen of ♀ with terminal segment much swollen and very shortly rough-haired. Forewings with all veins present and separate, 2 from seven-eighths, 11 from three-fourths. Hindwings with 2 from two-thirds, 4 and 5 separate, connate or stalked, 6 absent, 11 absent, 12 anastomosing with cell.

Type, *H. tricolor* Wlk.

- | | |
|--|--------------------|
| 1. Collar red or orange | 2 |
| Collar black | <i>rufiventris</i> |
| 2. Forewings with reddish or orange markings | 2 |
| Forewings without such markings | <i>tricolor</i> |
| 3. Forewings with subapical orange or reddish spot | <i>erythrota</i> |
| Forewings without subapical spot | <i>xanthocoma</i> |

4. HESTIOCHORA XANTHOCOMA.

Meyr., PROC. LINN. SOC. N.S.W., 1886, p. 788.

North Australia: Darwin. Queensland: Westwood, Duaringa.

5. HESTIOCHORA ERYTHROTA.

Meyr., PROC. LINN. SOC. N.S.W., 1886, p. 789.

Queensland: Brisbane. New South Wales: Dorrigo, Sydney, Goulburn.

6. HESTIOCHORA TRICOLOR.

Procris tricolor Wlk., *Cat. Brit. Mus.*, i, p. 111.—*Hestiochora tricolor* Meyr., PROC. LINN. SOC. N.S.W., 1886, p. 789.

Queensland: Brisbane, Miles. New South Wales: Sydney, Bulli, Jervis Bay. Victoria: Melbourne, Wandin, Fernshaw, Healesville, Gisborne. Tasmania: Launceston, Deloraine, Hobart, Triabunna. South Australia: Mt. Lofty. Western Australia: Perth, Mt. Dale.

7. HESTIOCHORA RUFIVENTRIS.

Meyr., Proc. Linn. Soc. N.S.W., 1886, p. 790.

Victoria: Mallee District (National Museum, Melbourne). Western Australia: Albany, Geraldton.

Gen. 5. POLLANISUS Wlk.

Cat. Brit. Mus., i, p. 114.

Frons smooth, rounded, more or less projecting. Tongue present. Palpi short or moderate, porrect, slender, smooth, pointed. Antennae of ♂ bipectinate, but usually simple near apex, pectinations moderate, long, or very long; in ♀ stout, simple. Posterior tibiae without middle spurs, terminal spurs short, anterior tibiae without strigil. Forewings with all veins present and separate, or rarely 7 and 8 connate or short-stalked, 2 from not far before angle, 11 from four-fifths. Hindwings with 4 absent, 3 and 5 widely separate, approximated, or connate, 6 and 7 separate, 11 absent, 12 anastomosing with cell from before to beyond middle.

Type, *P. apicalis* Wlk. This, the principal Australian genus, is directly derived from *Neoprocris*. The species require careful discrimination. The ♀ is usually smaller than the ♂ and in one species nearly apterous.

1. Hindwings elongate, not broader than forewings, thinly scaled towards base	2
Hindwings not elongate, broader than forewings, uniformly scaled	9
2. Abdomen with white lateral margins <i>leucopleurus</i>	3
Abdomen not so	3
3. Forewings with pale spots <i>trimaculus</i>	4
Forewings not spotted	4
4. Forewings blackish-fuscous	5
Forewings brilliant blue-green <i>apicalis</i>	5
5. Collar brilliant coppery	6
Collar wholly or partly blue-green	3
6. Abdomen brilliant coppery or fuscous <i>subdolosus</i>	6
Abdomen brilliant blue-green	7
7. Thorax, except collar, fuscous <i>cyanotus</i>	7
Thorax mixed with brilliant coppery <i>empyreus</i>	7
8. Forewings sprinkled with metallic green <i>amethystinus</i>	8
Forewings and cilia wholly fuscous <i>eumetopus</i>	8
9. Forewings short, apex obtusely rounded, antennae of ♂ pectinate to apex, ♀ nearly apterous <i>calliceros</i>	9
Forewings proportionately longer, apex more pointed, antennae of ♂ simple near apex, ♀ with wings fully developed	10
10. Head and collar brilliant blue-green or coppery, hindwings with 3 and 5 separate	11
Head and collar dull bluish, hindwings with 3 and 5 connate or nearly so	11
. <i>coronias</i>	11
11. Thorax wholly brilliant blue-green or coppery <i>viridipulverulentus</i>	11
Thorax, except collar, blackish-fuscous <i>lithopastus</i>	11

8. POLLANISUS LEUCOPLEURUS.

Procris leucopleura Meyr., Proc. Linn. Soc. N.S.W., 1886, p. 792.

Queensland: Brisbane, Stradbroke I., Toowoomba. New South Wales: Gosford, Sydney, National Park.

9. POLLANISUS TRIMACULUS.

Procris trimacula Wlk., *Cat. Brit. Mus.*, i, p. 110; Meyr., Proc. Linn. Soc. N.S.W., 1886, p. 792.

New South Wales: Gosford, Sydney, National Park, Bulli.

I think the locality "Richmond River" may be an error.

7. HESTIOCHORA RUFIVENTRIS.

Meyr., Proc. Linn. Soc. N.S.W., 1886, p. 790.

Victoria: Mallee District (National Museum, Melbourne). Western Australia: Albany, Geraldton.

Gen. 5. POLLANISUS Wlk.

Cat. Brit. Mus., i, p. 114.

Frons smooth, rounded, more or less projecting. Tongue present. Palpi short or moderate, porrect, slender, smooth, pointed. Antennae of ♂ bipectinate, but usually simple near apex, pectinations moderate, long, or very long; in ♀ stout, simple. Posterior tibiae without middle spurs, terminal spurs short, anterior tibiae without strigil. Forewings with all veins present and separate, or rarely 7 and 8 connate or short-stalked, 2 from not far before angle, 11 from four-fifths. Hindwings with 4 absent, 3 and 5 widely separate, approximated, or connate, 6 and 7 separate, 11 absent, 12 anastomosing with cell from before to beyond middle.

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- | | |
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| Hindwings not elongate, broader than forewings, uniformly scaled | 9 |
| 2. Abdomen with white lateral margins | <i>leucopleurus</i> |
| Abdomen not so | 3 |
| 3. Forewings with pale spots | <i>trimaculus</i> |
| Forewings not spotted | 4 |
| 4. Forewings blackish-fuscous | 5 |
| Forewings brilliant blue-green | <i>apicalis</i> |
| 5. Collar brilliant coppery | 6 |
| Collar wholly or partly blue-green | 3 |
| 6. Abdomen brilliant coppery or fuscous | <i>subdolosus</i> |
| Abdomen brilliant blue-green | 7 |
| 7. Thorax, except collar, fuscous | <i>cyanotus</i> |
| Thorax mixed with brilliant coppery | <i>empyreus</i> |
| 8. Forewings sprinkled with metallic green | <i>amethystinus</i> |
| Forewings and cilia wholly fuscous | <i>eumetopus</i> |
| 9. Forewings short, apex obtusely rounded, antennae of ♂ pectinate to apex, ♀ nearly apterous | <i>calliceros</i> |
| Forewings proportionately longer, apex more pointed, antennae of ♂ simple near apex, ♀ with wings fully developed | 10 |
| 10. Head and collar brilliant blue-green or coppery, hindwings with 3 and 5 separate | 11 |
| Head and collar dull bluish, hindwings with 3 and 5 connate or nearly so | <i>coronias</i> |
| 11. Thorax wholly brilliant blue-green or coppery | <i>viridipulverulentus</i> |
| Thorax, except collar, blackish-fuscous | <i>lithopastus</i> |

8. POLLANISUS LEUCOPLEURUS.

Procris leucopleura Meyr., Proc. Linn. Soc. N.S.W., 1886, p. 792.

Queensland: Brisbane, Stradbroke I., Toowoomba. New South Wales: Gosford, Sydney, National Park.

9. POLLANISUS TRIMACULUS.

Procris trimacula Wlk., *Cat. Brit. Mus.*, i, p. 110; Meyr., Proc. Linn. Soc. N.S.W., 1886, p. 792.

New South Wales: Gosford, Sydney, National Park, Bulli.

I think the locality "Richmond River" may be an error.

10. POLLANISUS SUBDOLOSUS.

Procris subdolosa Wlk., *Cat. Brit. Mus.*, xxxi, p. 62; MEYR., *PROC. LINN. SOC. N.S.W.*, 1886, p. 793.

The abdomen varies in colour from brilliant metallic coppery-red to dull fuscous.

North Queensland: Cape York, Cairns, Herberton, Palm Is., Townsville. Qland: Yeppoon, Rockhampton, Eidsvold, Gayndah, Nambour, Caloundra, Brisbane, Stradbroke Is., Mt. Tambourine, Coolangatta, Bunya Mts. (3,000 ft.), Stanthorpe. New South Wales: Lismore, Tenterfield, Glen Innes, Newcastle, Sydney, National Park, Bulli, Wollongong, Jervis Bay. Victoria: Melbourne, Wandin. Tasmania: Launceston, Beaconsfield. Western Australia: Albany.

11. POLLANISUS CYANOTUS.

Procris cyanota MEYR., *PROC. LINN. SOC. N.S.W.*, 1886, p. 793.

New South Wales: Sydney, Bathurst.

12. POLLANISUS EMPYREUS.

Procris empyrea MEYR., *PROC. LINN. SOC. N.S.W.*, 1887, p. 927.

This is slightly larger than *cyanotus*, the thorax wholly or partly brilliant coppery, and there is some coppery irroration on forewings.

Western Australia: Albany, Denmark.

13. POLLANISUS AMETHYSTINUS.

Procris amethystina MEYR., *PROC. LINN. SOC. N.S.W.*, 1887, p. 927.

This is somewhat larger than the following; the forewings are sprinkled with metallic green.

Western Australia: Perth, Mt. Dale, Bunbury.

14. POLLANISUS EUMETOPUS, n. sp.

εὐμετώπος, with beautiful forehead.

♂. 16 mm. Head bright metallic blue; crown partly fuscous. Palpi short and very slender; fuscous. Antennae fuscous; pectinations in ♂ 6, apical one-eighth simple. Thorax fuscous; collar and underside bright metallic blue. Abdomen fuscous; most of dorsum bright metallic blue-green. Legs fuscous. Forewings elongate, costa nearly straight, apex round-pointed, termen slightly rounded, strongly oblique; fuscous; cilia fuscous. Hindwings rather narrow; 3 and 5 separate; fuscous; rather thinly scaled in disc towards base; cilia fuscous. Underside of hindwings partly suffused with bright metallic blue.

North Queensland: Kuranda, near Cairns, in June; one specimen.

15. POLLANISUS APICALIS.

Procris apicalis Wlk., *Cat. Brit. Mus.*, i, 1854, p. 111; MEYR., *PROC. LINN. SOC. N.S.W.*, 1886, p. 794.—*Pollanisus sequens* Wlk., *Cat. Brit. Mus.*, i, p. 115.—*Procris novae-hollandiae* Wlgrn., *Wien. Ent. Mon.*, 1860, p. 39.

North Queensland: Herberton. Queensland: Blackbutt, Stradbroke I., Coolangatta. New South Wales: Lismore, Tabulam, Newcastle, Gosford, Sydney, National Park, Jervis Bay, Mt. Kosciusko (3-3,500 ft.). Victoria: Dimboola. Western Australia: Bunbury.

16. POLLANISUS CALLICEROS Turn.

Proc. Roy. Soc. Tas., 1925, p. 115.

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New South Wales: Ebor (4,000 ft.), Barrington Tops (4-5,000 ft.), Moonbar in Monaro District (3-3,500 ft., Helms). Tasmania: Moina (2,000 ft.) on Cradle Mountain Road.

Mr. G. M. Goldfinch sends me a ♂ and what I believe to be a ♀ of this species from Barrington Tops. The latter has simple antennae, broad abdomen with large grey terminal tuft, thorax and legs rather small but normal, wings reduced to very small rudiments.

17. *POLLANISUS VIRIDIPULVERULENTUS*.

Procris viridipulverulenta Guér., *Mag. Zool.*, 1839, Pl. 11, f. 3; Meyr., *Proc. Linn. Soc. N.S.W.*, 1886, p. 794.—*Pollanisus cupreus* Wlk., *Cat. Brit. Mus.*, i, p. 115; Meyr., *l.c.*, p. 794.

Queensland: Yeppoon, Duarina, Caloundra, Brisbane, Toowoomba, Warwick, Stanthorpe. New South Wales: Ebor, Newcastle, Sydney, Jervis Bay, Katoomba, Bathurst. Victoria: Melbourne, Geelong, Wandin, Castlemaine, Gisborne, Birchip, Sea Lake. Tasmania: Launceston, Zeehan, Strahan, Cradle Mt. (2-3,000 ft.), Hobart, Tasman Peninsula. South Australia: Adelaide, Port Victor, Port Lincoln. Western Australia: Albany, Busselton, Perth, Waroona, York, Geraldton.

The Eastern Australian form is nearly always brilliant blue, blue-green; or green; the Western Australian (*cupreus*) nearly always purple-coppery, but occasionally green; the South Australian (*adelaidae*) green, or coppery-green, is intermediate. I have also a coppery-green ♂ from Strahan. We may distinguish three local races: to regard them as subspecies would I think, involve us in the absurd position of being unable to determine to what subspecies a specimen belongs, except by reading the locality label.

18. *POLLANISUS LITHOPASTUS*, n. sp.

λιθοπαστος, jewel-sprinkled.

♂. 18-24 mm. ♀. 18-20 mm. Head fuscous; face shining blue or blue-green. Palpi short, slender; fuscous. Antennae fuscous; pectinations in ♂ 5, apical one-tenth simple. Thorax fuscous; collar and underside shining blue or blue-green. Abdomen fuscous; dorsum partly or wholly shining blue or blue-green. Legs fuscous. Forewings triangular, costa straight to two-thirds, thence gently arched, apex round-pointed, termen only slightly rounded, slightly oblique; fuscous irrorated with a few or many shining blue-green scales; cilia fuscous, apices paler. Hindwings broad; 3 and 5 separate; fuscous; uniformly scaled; cilia fuscous. Underside of hindwings, and sometimes also of forewings, more or less irrorated with shining blue-green scales.

One example from Strahan has the blue-green markings and irroration replaced by coppery-red. Near *viridipulverulentus*, from which it differs in the fuscous crown, thorax and forewings.

New South Wales: Ebor (4,000 ft.) in January, Barrington Tops (4-5,000 ft.) in December. Victoria: Melbourne, Wandin (Beaconsfield) in December, Gisborne in January, Yinnar, near Moe, in December. Tasmania: Cradle Mountain (2,000 ft.) in January, Rosebery, near Zeehan, in February, Strahan in February. Thirteen specimens.

19. *POLLANISUS CORONIAS*.

Procris coronias Meyr., *Proc. Linn. Soc. N.S.W.*, 1886, p. 792.

This species may be recognized by its comparatively short antennal pectinations, complete absence of brilliant or metallic colouring, and close approximation of 3 and 5 of hindwings.

New South Wales: Ebor (4,000 ft.), Barrington Tops (4-5,000 ft.), Moonbar in Monaro District (3-3,500 ft., Helms). Tasmania: Moina (2,000 ft.) on Cradle Mountain Road.

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Queensland: Yeppoon, Duarina, Caloundra, Brisbane, Toowoomba, Warwick, Stanthorpe. New South Wales: Ebor, Newcastle, Sydney, Jervis Bay, Katoomba, Bathurst. Victoria: Melbourne, Geelong, Wandin, Castlemaine, Gisborne, Birchip, Sea Lake. Tasmania: Launceston, Zeehan, Strahan, Cradle Mt. (2-3,000 ft.), Hobart, Tasman Peninsula. South Australia: Adelaide, Port Victor, Port Lincoln. Western Australia: Albany, Busselton, Perth, Waroona, York, Geraldton.

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This species may be recognized by its comparatively short antennal pectinations, complete absence of brilliant or metallic colouring, and close approximation of 3 and 5 of hindwings.

New South Wales: Glen Innes, Ebor (4,000 ft.), Barrington Tops (4-5,000 ft.), Gosford, Sydney. Victoria: Melbourne, Wandin, Moe, Gisborne, Dunkeld. Tasmania: Zeehan. The locality "Maryborough" may be an error.

Gen. 6. NEOPROCRIS, nov.

Frons smooth, rounded, projecting. Tongue present. Palpi moderate, porrect, smooth, slender, pointed. Antennae in ♂ shortly bipectinate, towards apex simple; of ♀ thickened except near base, simple. Abdomen broadly flattened. Posterior tibiae without middle spurs; terminal spurs short; anterior tibiae without strigil. Forewings with all veins present and separate, 2 from four-fifths, 11 from four-fifths. Hindwings with all veins present, 3 and 4 connate or stalked, 5, 6, 7 separate, parallel, 11 absent, 12 anastomosing at a point with middle of cell.

Type, *N. dolens* Wlk. Nearly allied to the European genus *Procris*. Not having any examples of the latter for examination I cannot be sure of its distinctness, but I infer from Meyrick's British Lepidoptera that in it 11 arises from middle of cell and runs into 12 as in *Zygaena*.

20. NEOPROCRIS DOLENS.

Procris dolens Wlk., *Cat. Brit. Mus.*, i, p. 112; Meyr., *Proc. Linn. Soc. N.S.W.*, 1886, p. 791.

New South Wales: Barrington Tops (4-5,000 ft.). Victoria: Melbourne, Wandin, Gisborne. Tasmania: Cradle Mt. (2-3,000 ft.), Zeehan, Campbelltown, Hobart, Huon River. South Australia: Mt. Lofty.

Index to Zygaenidae.

GENERA.

Hestiochora, 4; Homophylotis, 2; Neoprocris, 6; Onceropyga, 3; Pollanisis, 5; Thyraissa, 1.

SPECIES.

(Synonyms in italics.)

amethystinus, 13; anelia, 3; apicalis, 15; calliceros, 16; coronias, 19; *cupreus*, 17; cyanotus, 11; dolens, 20; empyreus, 12; erythrota, 5; eumetopus, 14; inconcinna, 1; leucopleurus, 8; lithopastus, 18; *mimetica*, 1; *novae-hollandiae*, 15; ruiventris, 7; *sequens*, 15; subdolosus, 10; tricolor, 6; trimaculus, 9; thyridota, 2; viridipulverulentus, 17; xanthocoma, 4.

New South Wales: Glen Innes, Ebor (4,000 ft.), Barrington Tops (4-5,000 ft.), Gosford, Sydney. Victoria: Melbourne, Wandin, Moe, Gisborne, Dunkeld. Tasmania: Zeehan. The locality "Maryborough" may be an error.

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New South Wales: Barrington Tops (4-5,000 ft.). Victoria: Melbourne, Wandin, Gisborne. Tasmania: Cradle Mt. (2-3,000 ft.), Zeehan, Campbelltown, Hobart, Huon River. South Australia: Mt. Lofty.

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